



# The Road to the AI Impact Summit - Bangalore 2025



openness



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1. Overview

1.1 Executive Summary: TLDR

This report, focuses on The Road to the India AI Impact Summit and asserts that openness is the essential foundation for achieving the Summit’s mission of “People, Planet and Progress” through its seven thematic “Chakras”. The core message is that artificial intelligence (AI)’s future legitimacy, innovation, and global access depend on embracing open source, open standards, and open data, particularly for developing nations.

Key Themes and Findings

1. Openness Drives Global Innovation and Access

- Defining Openness: Due to the complex nature of AI, it is more appropriate to focus on the openness of underlying components (software, models, data) than to try to define “open source” AI itself. The concept of “Open Chakra AI” is introduced as AI that supports universal access in an open way across India’s Impact Summit seven thematic goals expressed as chakras.
- The Power of Iterative development: Openness enables rapid, cost-effective iteration. The release of Meta’s open innovation model Llama2 is cited as critical, enabling China’s DeepSeek R1 (an “Open Weight” model) to be developed at 20% of the cost of previous Large Language Models (LLMs), which exemplifies a leap in innovation driven by openness.
- Democratisation and Inclusion: Prime Minister Modi’s call for “access for all” through open source at the Paris Action Summit is highlighted as critical to shifting AI innovation from the few to the many and bringing the Global South into the AI discourse and governance conversation.

2. Sovereignty, Dependency, and Trust

- Reframing Sovereignty: The report challenges the traditional view of digital sovereignty requiring local tech creation, suggesting the core issue is reliance on a few vendors (dependency) rather than origin. Open source offers a pathway to resilience through access by providing access to the underlying technology to break dependency, interoperability, and local control.
- Policy Approaches: The UK’s approach is pragmatic and non-isolationist, relying on global partnerships and open source. India’s mission is driven to build domestic capabilities using accessible and open AI technology, including commissioning a Sovereign AI team. The EU’s approach links sovereignty to open architecture and standards (Eurostack) but faces risks of fragmentation through “local source” efforts,
- Governance and Trust: Openness provides transparency, forming the basis for safe and trusted AI. Using open source software tooling for AI (like the UK’s “Inspect” LLM Testing Platform) creates governance as code, providing solutions for safe, trusted, and efficient AI development.

3. Data and Application in Healthcare

- The Data Challenge: Data remains the critical challenge for openness in AI. For India, datasets must reflect its linguistic, cultural, and socioeconomic diversity to prevent sovereign models from inheriting the blind spots of generic Western-trained systems. Building inclusive Indic corpora and shifting public data from complex formats (like PDFs) to clean, structured, open datasets is essential.
- Open Source in Health: Open source is vital for healthcare due to its need for transparency, customisability, and cost efficiency. Case studies show open source platforms like Bahmni (an Electronic Medical Record system for low-resource environments) and the Open Healthcare Network (OHN), which uses AI for optimising workflows like Scribe (speech-to-text for EMR), enable local adaptation, interoperability (using standards like FHIR), and data sovereignty through open standards and open source.

The Global Data Update

The report concludes that AI openness must move beyond philosophical debate to concrete actions, such as standardising the definition of openness, supporting maximally open models, and developing open alternatives for proprietary infrastructure bottlenecks (like NVIDIA’s CUDA).

The 2026 India AI Impact Summit offers the critical opportunity to champion this vision of open, inclusive, and legitimate AI, or “**Open Chakra AI**”, for collective progress.

Global Data Landscape Summary

Country	Metric	Data Point	Implication
India	Annual Growth in AI Repositories (1k+ stars)	50% (Globally Fastest Growing)	India is rapidly scaling its home-grown AI projects
India	Contributor Base	#1 Largest Open Source Contributor Base	India is a key shaper of global development, adding over 5 million new developers in 2025
UK	Annual Growth in AI Repositories (1k+ stars)	32%	Strong, innovation-led growth, outperforming the EU's 22%
UK	Concentration of Talent	7.1% of population has a GitHub account	One of the most concentrated developer bases globally
Global	AI-Assisted Coding	80% of new GitHub developers use Copilot within one week	AI-powered assistance has redefined coding as a collaborative, human-AI process

1.2 Introduction to the Report

Amanda Brock,  
CEO, OpenUK and OpenHQ



India AI Impact Summit

As India prepares to host the next Global AI Summit in New Delhi during February 2026, we are witnessing a visible shift from the 2025 Paris Summit’s focus on “Action” to India’s focus on “Impact”. The “[India AI Impact Summit](#)” breaks its mission into three “Sutras” forming its goals of “People, Planet and Progress”. The three Sutras are supplemented by seven “Chakras” - Human Capital; Inclusion for Social Empowerment; Safe and Trusted AI; Resilience; Innovation and Efficiency; Science; Democratising AI Resource; and AI for Economic Growth and Social.

AI Openness

There has been endless debate on the meaning of “open source” in AI. This is touched on at various points in the report’s Thought Leadership. Today, there is no clear answer and little support of any significance for the Open Source Initiative’s “Open Source AI Definition” (OSAID). In many ways, it is arguably wrong to attempt to define AI as it is a sector or vertical - like cloud or mobile - within digital. Rather, the underlying technologies, including software, weights, models and data, should be the subject of any additional and necessary definitions. Any such definition should be managed with great care, so as not to undermine the long established and essential Open Source Definition (OSD) in software. What we can however all be clear on is that outputs must be usable by anyone for any purpose (subject to any applicable legal restriction).

At OpenUK, whilst we advocate for open source, we work on the basis that there are shades of openness. All of these shades may be beneficial at points, depending on the circumstances. That pragmatism allowed us to partner with Meta on the launch of Llama2 in July 2023. Until its launch it was carefully framed as “open innovation” as its licence contains commercial restrictions inhibiting it from being open source.

Our Board made the unanimous decision to support this launch and whilst we would never condone open washing, we fully stand behind our decision to support Llama being opened up by Meta. That opening-up of a Large Language Model (LLM) and enabling access was critical. In my view the innovation that this has enabled means that this step will be included in the annals of AI history as a key moment of shift.

Without that opening up of Llama2, we would not have seen “DeepSeek R1” in January 2025.

DeepSeek used distillation of Llama to build its reasoning LLM not only creating new innovation but at 20% of the cost of building past LLMs, driving the cost of AI down and making it potentially more accessible. This is a truly wonderful example of the iterative innovation that open source enables. It demonstrates a leap in innovation based on openness, in line with the Science and AI for economic growth Chakras. Not only can innovators build and create new products by iterating on it, but businesses, Small and Medium Enterprises (SMEs) and even individuals, may gain access to the AI tools they need to build better productivity in their businesses and lives.

The creation of R1 also demonstrates beautifully the global nature of open source and its globally-collaborative community, with a Chinese organisation innovating on a US organisation’s AI technology.

The Chinese organisation used a true open source licence for its distribution, which allowed anyone to use what was licensed for any purpose. The use of an open source licence is however not a magic wand. We must consider not only the licence content and check that it is open source, but also look at what components the licence applies to? Is the whole of the AI openly licensed with all of its components made accessible?



DeepSeek R1's was trained in China and the training data wasn't opened up or accessible. R1 would rightly therefore be referred to as "Open Weight" or "Open Model AI: Despite having an open source licence for the weights/model the whole AI is not accessible.

However, R1 was shared with very good documentation. Within days of its release Hugging Face built "R1-Open" using public data. This was possible thanks to that documentation giving access to clear instructions. Again... iterative development. This time, a French company iterated on a Chinese company's AI that was created by distilling AI that originated in the US.

### "Open Chakra AI"

Rather than debate the meaning of open source AI, I suggest we take advantage of India's Impact Summit to focus on the Summit's thematic Seven Chakras.

In seeking to achieve impact through openness, we should consider "Open Chakra AI" - AI that supports access for all being achieved in an open way via its seven Chakras.

Exploring this in the context of AI openness we see that within AI, open source, open standards and opening data, all speak to both the Sutras and Chakras. The Chakras are met for human capital through community which is at the heart of open source. This reminds me of the Apache Way - "People over code". Additionally, it meets the requirements of people through inclusion and empowerment within its contributing community as well as through providing the access to AI for all people that well managed openness can enable. Openness, and the transparency it provides, form the basis of safe and trusted AI. We see global governance and greater trust made possible through an approach of "tools not rules". By sharing software tooling for AI that is open source we can create defacto standards for AI developers. Instead of asking an innovator to read a long rule book we provide freely available tools to embed in the development process thereby creating governance as code and speaking to existing development practices.

Initiatives like ROOST are already building this. The UK's AI Security Institute "Inspect" LLM Testing Platform which is open sourced to enable self-testing of LLMs, is a great example of this. These tools provide solutions that create safe and trusted AI, they are efficient and enable growth, whilst also democratising achieving this.

Resilience can also be enabled through global, open, community collaboration. Well managed open infrastructure underscores sustainable AI infrastructure. Today in open source software we look for healthy collaborating communities as part of our assessment of software. In the future we are likely to look for this in AI.

Arguably open source is one of the greatest efficiencies technology has ever seen and enables iterative and faster innovation on the shoulders of giants, with many eyes making bugs shallow to boot. Only through this opening of AI will we see access for all people and the democratisation of technology. Not only will access democratise technology it will increase innovation and enable economic growth by shifting AI from the hands of the few to the many.

This "access for all," across the globe was set out in the call to action from Prime Minister Modi of India in his opening address at the Paris Action Summit. To achieve this we must see an AI that is Open Chakra AI.

### Sovereignty

Unsurprisingly, our report meets the buzzword of 2025 - Sovereignty!

We look to access for all to enable localisation of technology. Various approaches from EuroStack's localisation to the UK's non-isolationist global partnerships are considered. All look to open source as open source is an inevitability. Open source is indeed a cornerstone of technology today as it is impossible to create a stack that does not use open source.

I'd remind everyone that the dependencies of open source and projects' contributors are open source. Seeking to bifurcate and localise goes against the principles of global collaboration that have made open source successful. All projects have international contributions or dependencies.

Fundamentally we seek to meet a societal concern around dependence on third party technology. Really our concern is access. If we can gain access to the technologies in a way that removes dependency and risk, then our needs should be met.

I enjoyed the Nvidia CEO, Jensen Huang's explanation of "intelligence" at GTC in Paris. In explaining this he considers the need for local intelligence in an LLM. He doesn't mean the secret service and security by this - although he does include that - but also a nation's culture and its language. Training an LLM on this local intelligence, using accessible and open AI technology from across the globe will indeed meet these needs. Huang is the consummate salesman. Here he not only sells Nvidia Chips, the GPUs to power compute but also a dream of Sovereignty. In this case it's a dream the reality of which can be enabled by openness of the AI.

### Data and Healthcare

You will also see that data - the main challenge of openness in AI, is a key focus of this report. We hear from local experts in India on the data challenges and from Indian and UK experts about work to open up health-care through open standards and open source software and AI tools.

### OpenHQ and our work in India

Our work for the Impact Summit began in August, with a journey across India from Hyderabad to Bangalore, from Bangalore to Mumbai, and Mumbai to Delhi. During this journey OpenUK soft launched our new sister organisation OpenHQ. Its mission is to support local open source communities in policy work, when there are initiatives such as the AI Impact Summit. We used this to coalesce the local open source and policy communities across India. I am delighted to see many in those communities continuing to collaborate long after our event.



Having learned from our experience of organising a major fringe event at COP26 and working with the local French open source communities on the Road to the Paris AI Action Summit, we know that you must start early. August, 6 months prior to the Impact Summit felt about right. It has given us time to build engagement with the Impact Summit team and also to begin to build relationships with the local communities.

We very much hope to be hosting them in Delhi in an AI Openness event during the Summit, in an AI openness event or two.

### AI Summits

The UK instigated global AI summits with Rishi Sunak's Bletchley Park AI Safety Summit in November 2023, bringing together 100 world leaders in AI. The follow-on Paris AI Summit in 2025 saw a shift as the French summit moved from safety to action and placed openness at the centre of the discussion. The Paris summit



included 500 or so individuals. I was very honoured, in recognition of my work in open source, to have been invited and to have attended the summit.



Both China and the US delivered the same clear message to summit attendees - that they would not be held back in their innovation by other countries' legislation. We take a brief look at the policy and regulatory landscape across key nations including the US and China in this report.

India co-chaired the Paris Summit and will host the next global AI summit, likely in early 2026. Prime Minister Modi made clear in his opening address in Paris that "access for all" through "open source" will be critical. We can expect to see the public good and public interest AI conversation instigated by President Macron strengthen through the remainder of 2025 and into the 2026 summit, and outputs of the French summit like ROOST's open source tools and the work of the Current AI foundation growing.

### The Data Update

Importantly the report also dives into the latest global data and literature on AI and openness. We take a global approach, which then drills down into the top countries, followed by a more in-depth analysis of the UK and India.

In that data update we see parallels in the UK and India in terms of strengths in AI skills, but the need for more local projects. We see unprecedented growth in India whilst in the UK, over 4million GitHub accounts and the UK continues to track as the highest per capita in the world, when it comes to individuals participating in collaborative innovation. Globally, the US is the number one collaboration partner for the UK and India, but the UK and India have notable collaboration with the UK being India's second biggest collaboration partner after the US.

### Conclusion

Traditionally opening the seventh chakra is the step to enlightenment. I hope that this report will help take its audience on a journey of enlightenment as they discover Open Chakra AI and its potential for real impact, as we drive along the road to the AI Impact Summit.



"Openness in AI, or "Open Chakra AI" as Amanda suggests we call it for our India AI Impact Summit, is essential to allow access for all to the AI that is the critical technology of our future.

India and the global south needs that access for all people to enable their innovation on a local, sovereign basis and to ensure that the AI of the future works for these people."



**Shankar Maruwada**  
Co-Founder and CEO  
EKStep Foundation

### 1.3 The UK and India

The UK and India have a very active tech partnership and in July 2025, Prime Ministers Modi and Starmer endorsed the ambitious India-UK Vision 2035, a landmark agreement that reaffirms the shared commitment to unlocking the full potential of a revitalised partnership centering around collaboration across growth, defence and security, technology and innovation, climate and education.

In particular:

**Increased ambition:** since elevating the relationship to a Comprehensive Strategic Partnership, India and the UK have catalysed significant partnerships and growth across all sectors. The new vision builds on this momentum, setting ambitious goals to deepen and diversify bilateral co-operation.

**Technology cooperation:** This strategic partnership will accelerate innovation-led growth and strengthen both nations' roles in shaping the technologies of tomorrow.

**Technology Security Initiative and AI:** The UK-India Technology Security Initiative is a landmark agreement committing both nations to greater collaboration on seven emerging technologies—including safe and secure by design AI.

The first UK-India Conference on AI opportunities, held in 2025, explored solutions for the safe and responsible use of AI, skill-building and talent development, and the opportunities for AI to help deliver growth in the UK and India. In the build up to the Global Impact Summit hosted by India, collaborative joint hackathons, sandpit exercises and sprints have been held to identify and nurture promising innovators developing AI solutions for climate, finance, health and more. The UK has closely supported India in multilateral fora such as the Global Partnership on AI, which India chaired in 2023.

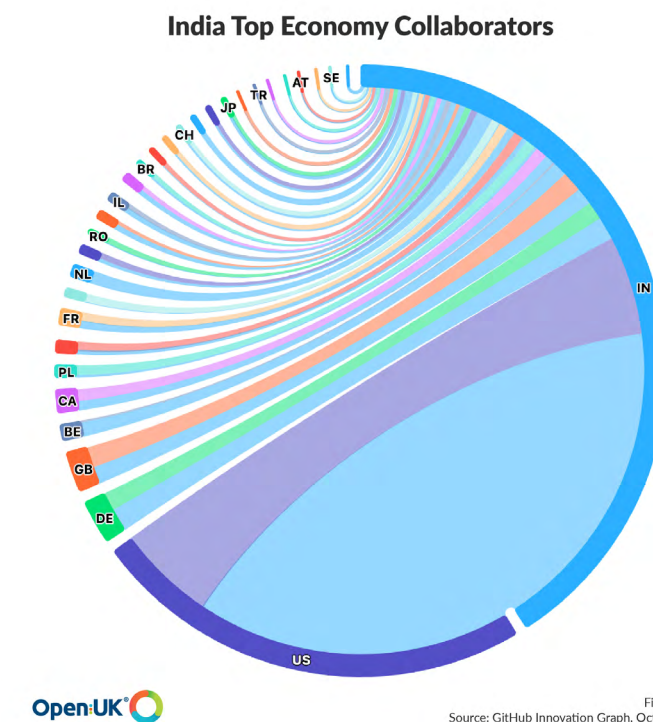
More recently, Prime Ministers Starmer and Modi announced the ambition to create a UK-India Joint Centre on AI that will promote “trusted real world AI innovations and widespread adoption.” The £24million joint India-UK Connectivity and Innovation Centre leverages AI to transform telecoms networks.

The upcoming Global AI Impact Summit will be a defining moment for shaping both the bilateral and the global AI agenda. The UK and India are likely close partners in progressing international AI norms on risk and safety, promoting opportunities for growth and investment, and deepening collaboration on use of AI for climate, health, agriculture, fintech and advanced technologies. This will leverage the UK's position as the world's third-largest AI market and India's emergence as one of the most affordable destinations for compute, its vibrant technology start-up scene, significant R&D investment, and renowned entrepreneurial ecosystem, creating new AI-driven economies that will deliver prosperity for both our nations.

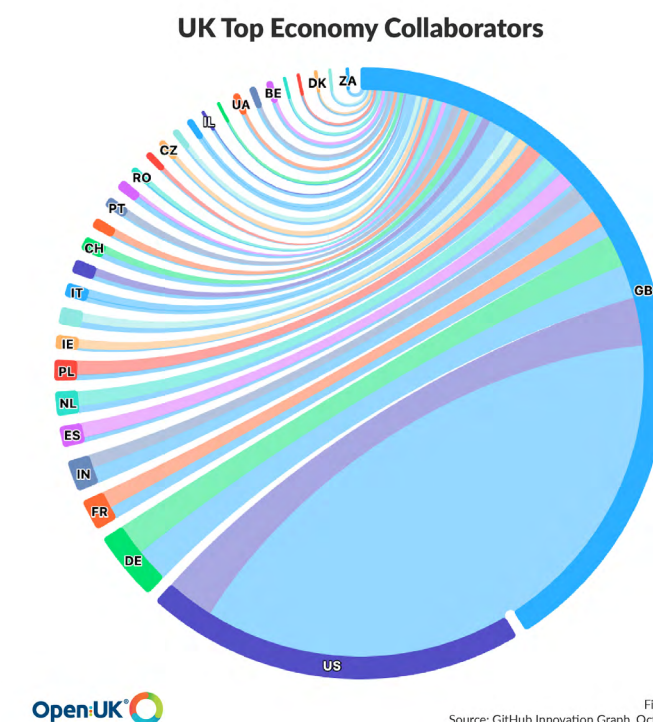
Openness in AI will likely play a significant part in this work as this Report explains.

### 1.4 India and UK Collaboration

When we look at GitHub's collaboration data, unsurprisingly we see the U.S. is India's primary collaboration partner. The UK, despite its much more diminutive size, is India's second largest collaboration partner, reflecting the close relationship.



When we look to the UK's collaboration partners, it's unsurprising to see that the U.S. is also the UK's primary collaboration partner. In the case of the UK, it then collaborates with its neighbours Germany and France in that order, somewhat reflecting the scale of Europe's open source communities, and in fourth place is its collaboration with India.





## 2. The Road to the AI Impact Summit

### 2.1 Introduction to India's AI Impact Summit

**Abhishek Singh**  
Additional Secretary,  
Ministry of Electronics and Information Technology (MeitY),  
Government of India



As well as being an Additional Secretary in MeitY as part of the Government of India, I lead India's AI Mission. As the CEO of India's AI Mission, I'm leading the efforts toward hosting the Impact Summit in Delhi in February 2026.



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India's vision for AI is to ensure that we use AI to enable services for all, by ensuring that the benefits of the technology lead to economic growth, gains in productivity and efficiency, and improved access to public services—such as health, education, and services to farmers; in short, to benefit every sector of the economy.

We believe that India, with its strong engineering talent and demographic strength, combined with its young population, strong coding abilities, and experience in using technology for public digital transformation projects can play a big role in using AI to bring positive change. We are implementing India's AI Mission, which seeks to address all the gaps in our AI story today through the provision of compute and data.

Already, we are building foundation models and applications; up-skilling and supporting startups, and building tools for AI safety and trust. All this work happening in India is what we hope to showcase at the AI Impact Summit, when the whole world will be here to see how technology is progressing and what steps we can take as a global community to ensure that AI works for the benefit of all.

We believe that, to truly benefit from this technology, it must be democratised. We must ensure access to compute, data sets, and algorithms, and our approach is to build models that are open source.

The models we are building will be available for the larger community to use. They can be used for inferring and application development that helps solve societal challenges across sectors. For example, open source AI models can support healthcare by helping diagnose diseases such as cataract, tuberculosis, or cancer. They can enable access to education through AI tutors and personalised learning plans. They can also support entrepreneurs and developers building tools to address challenges faced by farmers. These solutions will help make systems efficient. We need to ensure that they benefit small businesses. These grand challenges for society are the focus under the India AI Mission. What is clear is that the applications we develop will be such that the larger community can benefit.

One of the biggest challenges today is ensuring access to compute. Only a year ago, India had very little compute available. Globally, only a few countries and a few companies have access to high-end AI compute. Everyone is using Nvidia chips; one company controls 90% of the market. As for models, they are mostly concentrated in the United States. Although China has developed its own, model development remains confined to very few countries. Then there is the question of data sets - how to make them available for training models and building applications.

Talent is another challenge, though India is better placed here. We have a large pool of engineering talent. Our software engineers are part of almost every big tech company. Our experience shows that we can effectively use our youth and trained engineers, but only if we provide them with the necessary compute and data sets. Only then can they build cutting-edge AI applications and solutions.

India is growing fast. The story of India is growth. Our government is proactive in providing all the support needed to realise our potential. If you look at talent and at GitHub AI repositories, we are leading contributors to many AI projects, accounting for almost 20% of AI application development on GitHub. The Stanford AI Index ranks India number one in skill penetration.

So we have the talent, there's no doubt. The government believes that to realise India's full potential, we must support compute for foundation models, provide financial support for training models, and enable access to data sets. The government's proactive approach and our large talent base are helping us grow rapidly, not only in AI but across almost every sector.

What is of the essence is to understand that, to keep up with companies like OpenAI and Nvidia—which are moving very fast—the rest of the world requires significant and collaborative effort. It also concerns me that the larger global majority—the Global South—is becoming an AI user rather than contributing to the AI discourse. These countries are not sufficiently part of the conversations on AI governance, how to ensure AI is used for the larger good, or how to limit harm. We need to bring the Global South into that discourse. That is one of the key objectives of the Impact Summit. We will not only showcase AI technologies and their potential, but also bring AI users into the discussions. In doing so, we can involve researchers, developers, and entrepreneurs from across the world in building an AI future that benefits all of us.



## 2.2 AI Openness: Impact, Access and Innovation

### Roundtable and Dinner, London 11 November 2025 Official Pre-Summit Event of the AI Impact Summit 2026

OpenUK hosted Abhishek Singh, Additional Secretary in the Ministry of Electronics and IT and CEO of India's AI Mission with a diverse group of AI-knowledgeable parties, representing the open technology ecosystem. This included AI startups, Big Tech, and civil society. They work across the ecosystem from ML to API development, Cloud, Data Centres, and AI Infrastructure. Their roles range from academics, to founders, business people, and political representation, with Dame Chi Onwurah, Chair of the Science, Innovation, and Technology Committee joining the fray.



**"AI Openness: Impact, Access and Innovation" Dinner  
Official Pre-Summit Event of the AI Impact Summit 2026**



Through the dinner Abhishek outlined India's vision for AI (which is also explained in his introduction at 1.4). This focuses on leveraging technology for services, economic growth, and efficiency across all sectors, and highlights the AI Mission's goals to provide compute, data sets, foundation models, to enable India's skilled workforce to engage in more development. He also emphasised support for safe AI.

Joanna Hodgson, RedHat's UK and Ireland Regional Leader, added that Innovation in AI is happening so fast because of open collaboration around the world. Openness also provides a powerful opportunity to unify the fragmented landscape of AI and create operational efficiency by providing a consistent foundation that is interoperable with any model, any hardware and any cloud. A major consideration around AI is sovereignty, and an enterprise open source platform can embed security and policies as well as provide essential transparency, portability and control. In all, openness will help organisations move beyond siloed pilots and scale AI development into production so as to deliver unified, holistic services that benefit citizens.

The question of sovereignty inevitably came to the fore. Amanda Brock, OpenUK CEO, who moderated the event challenged the audience with the provocation that sovereignty isn't really the question, but dependency and access is. By this, she suggested that we don't actually care about where tech is from or who creates it, but rather we worry about being dependent. So the challenge faced is one of real interoperability and access to the underlying technology. Unsurprisingly perhaps, she suggested that open source is the answer, as giving access to the technology enables interoperability and also removes the risks of dependency.

"Without open source and open weights we wouldn't be able to schedule state-of-the-art LLMs onto GPUs and run high performance streaming desktop environments for swarms of coding agents. If you can run your entire stack locally on your own infrastructure, sovereignty is the default. And open source enables that, with open access," added Luke Marsden, founder of HelixML.

There was much discussion around democratising technology through open source - whatever that was to mean. It was very clear that open weight models were perceived by the group as necessary to solve many societal challenges and to ensure that there is access for all. Abhishek emphasised that applications developed under the India Mission are open source to enable broader community benefit. A primary challenge he recognised is the availability of high-end AI compute and relevant data sets, but felt that India is positioned as a leading contributor to AI projects on GitHub due to its strong talent pool. That didn't stop concerns about the significant and growing gap between the AI haves and wannabes.

Professor Dimitra Simeonidou, Director of the Smart Internet Lab at the University of Bristol and the Chief Scientific Advisor to the European Commission, took the conversation to the mobile space. She flagged that as AI grows more distributed, the network must evolve into an intelligent fabric for compute, bringing processing closer to where data is generated, at the edge, and within the network. This is key to making AI resources scalable, sustainable, diversified, and accessible to all.

And whilst mobile forms a part of today's critical infrastructure data centres, are a major challenge. Stelia Chief of Staff, Dan Scarborough explained 'the forecast demand for power is going through the roof, with the 80kw rack due to be released at the end of next year the power demand for clusters is going up and the demand for AI Data Centers in Europe is scaling rapidly.'

There was much debate around the future of the data centre, and where compute might happen in future. Could it actually go as far as the device? Certainly the need for and scale of monolithic data centres was considered. The conversation was filled with examples, from the concept of a data centre the size of a washing machine to cupboard sized data centres being rolled out to enable connectivity in Africa. The OpenUK Data Centre project work on edge-based data centres, with the potential to reduce emissions using open technologies, and re-purposing small local sites, bringing compute near the consumers was also touched upon.

Inevitably the question of data, training and inference was flagged considering what that means for data centres. OpenUK Board Director and CRO NeevCloud, Hiren Parekh raised that the AI compute landscape bifurcates centralised training and distributed inference. Frontier labs concentrate tens of thousands of GPUs—Meta's Llama4 used 32,000 GPUs—creating 28-29 megawatt clusters that strain datacentre power and cooling infrastructure. Conversely, studies suggest 74% of AI builders now report inference as their majority workload, driving rapid edge AI proliferation across 150 billion intelligent devices. Edge compute requires much lower latencies versus cloud, essential for autonomous vehicles and real-time consumer applications.

Josh Mesout, Chief Innovation Officer of UK Cloud company Civo, which has a strong presence in India, added "We're at the point where open source models have reached parity with the foundational models from major tech companies. Open source AI models are now due their "Linux moment", which fundamentally disrupts the economics of AI problem solving. Ensuring this is driven and advocated by a global community is paramount.

It was very clear that a critical part of the conversation around AI is about access to compute, not only to chips but to the necessary infrastructure. It's unsurprising that a practical group of people with deep tech experience jumped right into that debate but the challenge of data and access to data was repeated throughout the discussion.

Lee Fulmer, Consultant at McKinsey and OpenUK Finance Advisory Board Chair raised that a key component of AI openness is meaningful and accurate data, data which reflects the national interest and ensures legitimacy. The establishment of sovereign data sources supports collaboration between the UK and India while also creating trust in the output of our AI models."

Professor Anil Madhavapeddy, Professor of Planetary Computing at the University of Cambridge and co-lead of the Energy and Environment group in the Department of Computer Science, explained how their work



focuses on locating and protecting the approximately 150,000 terrestrial species on Earth. Their goal is to figure out where species at risk are and ensure human needs are met while allowing for coexistence with nature, especially since two-thirds of the world's species live in tropical rainforests and are threatened by human land use.

Anil explained that “The world is too large for any single database to contain all the necessary information, especially since hyperlocal decisions, where a few meters can change an ecosystem, require lots of local information. Therefore, open source is necessary to exchange data models and computational algorithms across hundreds of countries to determine species’ locations and manage land use effectively and accurately”.

India as a primary deployment area for their open source models as it possesses vast diversity of species and almost every climatic condition. They develop open source models such as TESSERA to map the world's land surface, to determine habitat classifications, impacts on hydrology for farmers, and the general effects of land use decisions, such as digging a well or building a farm, on the livelihoods of rural Indians and surrounding environments. “The interconnectedness of land use decisions means information must be shared to avoid adverse effects on neighboring communities, human health, and on nature.”

Putting people at the centre of the conversation and not jumping straight to the technology was also recognised. This wasn't just about the services that are generated, but in ensuring human need is met and of course access for all. Don Syme from GitHub Next talked about the importance of openness and community formation in the era of AI. AI presents opportunities for software communities, giving new tools for maintainers. While AI introduces new dynamics, it also enables communities to strengthen and grow collaboration.

And giving Naresh Vyas, co-founder of Twocents.ai, the last word, he added that “Open AI access has the opportunity to equalise the playing field, giving everyone an opportunity to build and create.”



### 3. Global AI Update and the rise of Sovereignty

#### 3.1 Thought Leadership: Global AI Policy in 2025

**Bharath Reddy**  
Associate Fellow, The Takshashila Institution



At the AI Action summit in Paris, [Prime Minister Modi envisioned a future](#) where AI could transform the lives of millions and presented open source systems that enhance trust and transparency as a pathway to that future. This has been echoed by several other leaders, but is undermined by geopolitical developments or market forces in the AI value chain. In the next iteration of the summit, there is an opportunity to take actionable steps to push towards an open and accessible AI future.

#### Geopolitics and AI

AI is a transformative general-purpose technology, much like the Internet or electricity. However, in the contest for power among states, it is being treated as a technology akin to [nuclear weapons](#). [Dominant narratives](#) frame it as technology that could alter the global balance of power, and it has become a hotly contested geopolitical battleground.

Unlike technologies of the past, where government-funded labs pioneered cutting-edge research, the state of the art in current emerging technologies lies predominantly in civilian applications. Private companies are responsible for most of the breakthroughs in the AI value chain. The inherent general-purpose nature of the technology lends itself to both civilian and military applications. When AI is seen as being more similar to nuclear weapons than electricity the strategies also focus on denial, outpacing adversaries and removing bottlenecks for domestic progress than ensuring the benefits of AI are accessible to all.

AI systems are built on layers of building blocks: data, compute, models and applications. Across this value chain, certain bottlenecks are being leveraged for geopolitical advantage. For instance, the [now-repealed US AI diffusion framework](#) tried to cleave the world into three tiers based on levels of trust that determine access to advanced AI chips and models. This framework has since been replaced with stringent [export controls](#) primarily targeting China. There are even efforts to [embed on-chip mechanisms](#) into semiconductor chips for geofencing or performance capping, actions that could seriously jeopardise trust in the global technology ecosystem.

Even in the absence of geopolitical interference, there is a high concentration of market power across these building blocks. Access to massive datasets, integration with cloud service providers as a distribution channel, massive compute resources required for training and inference, and the specialised human talent required to train these systems mean the most capable AI systems, both proprietary and open, are built almost exclusively by a few big tech companies.

While the geopolitical contest is largely playing out between the US and China, there are serious implications for the global ecosystem. The policy actions that follow from this narrative also move focus away from the action that is necessary to adopt AI responsibly across various sectors. It has also led many states to pursue ‘AI sovereignty’, which is typically interpreted as building domestic capabilities across the value chain. Many states across the world are building sovereign compute or models. This approach leads to the suboptimal use of both domestic and global resources and fragments innovation.

#### Openness and AI

While sovereignty often lends itself to other interpretations, states are justified in pursuing technostrategic autonomy in an increasingly uncertain and polarised world. AI that is open offers a pathway that enables the development and use of AI free from external control. However, not all so-called “open” AI models are equally open, and the conventional definitions of open source typically associated with software are poorly suited for AI systems.

To address and standardise the notion of openness when it comes to AI, [the Model Openness Framework \(MOF\)](#), proposed by the Linux Foundation, identifies several key artefacts - such as inference and training code, model weights, training data, reports, and documentation - that should accompany a model release. The MOF proposes three tiers of open releases:

- **Class III or Open Model:** This requires the public release of the core model (architecture, parameters, basic documentation) under open licenses, allowing consumers to use, analyse, and build on it.
- **Class II or Open Tooling:** Additionally includes the full suite of code used to train, evaluate, and run the model, as well as key datasets. This allows for better validation and transparency into the model.
- **Class I or Open Science:** This is a maximally open model that includes all artefacts that provide transparency into the end-to-end development pipeline, empowering further research, auditing, and cumulative progress.

The most capable open models are likely the Class III releases from big tech firms, such as Meta's LLaMA-3 or Alibaba's Qwen3. While being limited in their openness, these models still offer a degree of technostrategic autonomy for downstream users. Businesses can host these models themselves, cut operational costs, and avoid the need to share sensitive data with third-party vendors, but they have limited visibility into the model's inner workings. By contrast, the maximally open models, like those championed by non-profit groups such as EleutherAI, enable far greater transparency, academic research, and collaborative development.

### A Path Forward

Both the US and China have formally recognised the importance of AI that is open and prioritised its development in their national policies. The US AI Action Plan, for instance, stresses the "need to ensure America has leading open models founded on American values," suggesting these could become global standards in business and academic research. Similarly, China's AI+ initiative aims to "accelerate the construction of a globally open source technical system and community ecosystem, and develop internationally influential open source projects". AI openness has become a strategic priority for both the US and China, driven by an interest in shaping and controlling the ecosystem where innovation happens.

The upcoming AI Impact Summit offers an opportunity to move beyond rhetorical support for AI openness and build alignment towards advancing it as a pathway to technostrategic autonomy. These should include actionable steps such as:

- Ensure financial support and viability for maximally open (Class I) models, making them widely accessible to drive research and broad-based innovation.
- Addressing the ambiguity of "openness" is crucial. The summit should promote the standardisation and adoption of best practices for model releases, such as the Model Openness Framework (MOF), to ensure developers and users have clear visibility into the different classes of models they are deploying.
- Research and development into open alternatives to proprietary infrastructure that serve as the AI value chain's most critical chokepoints. Key areas include open source substitutes for powerful software like NVIDIA's CUDA programming platform, processor IP such as the RISC-V open specification, and electronic design automation tools like OpenROAD.
- Highlight the dangers of fragmentation of the global tech ecosystem by measures such as on-chip mechanisms for geofencing or performance capping.

By focusing on these actionable steps, the summit can focus on leveraging AI as a transformative technology that can enable collective progress.

### 3.2 Thought Leadership: From Contest to Collaboration, the path for AI Sovereignty

**Vivek Agarwal**  
Country Director, India  
Tony Blair Institute for Global Change



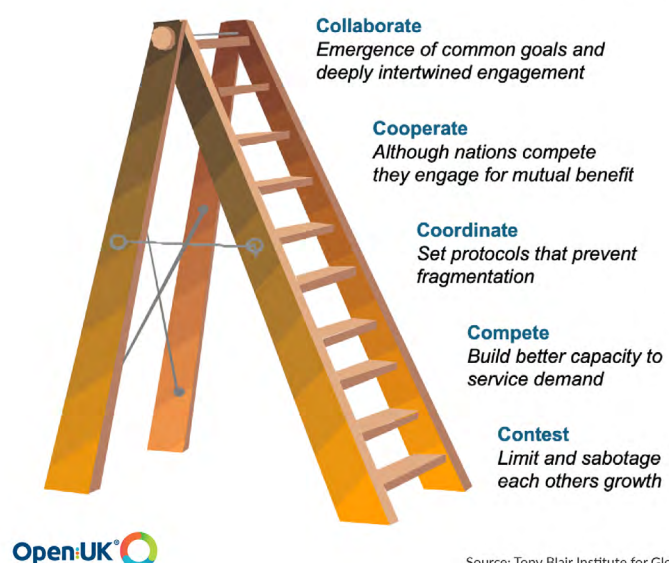
Technological capacity has always been entwined with economic life, but in this moment it goes beyond that entanglement. It's not an appendage of production; it is the very terrain on which global hierarchies are being built. The nation that possesses semiconductors or general-purpose models can shape the destinies of nations whose GDP numbers may be larger than theirs.

Amidst the great reordering of this new world order comes a new idea - one we ought to take seriously: AI sovereignty. Whereas classical sovereignty focused on territory, law and the monopolies of violence and taxation, AI sovereignty is simultaneously more diffuse and more totalising.

It is the ability of a political community to design its future in a world where decision, knowledge and even the very structure of social order may be ever more heavily filtered through systems whose logic cannot be comprehended in terms that are recognisable as political. In this sense AI sovereignty has less to do with territorial control and more to do with mastery of the digital infrastructure and knowledge - compute, data, models, standards and the interpretive regimes that govern them.

To get a sense of how countries navigate this terrain, it's helpful to picture a basic ladder of engagement that nations climb - or at least scramble up. At the bottom you have contestation, where states are trying to limit or sabotage each other's AI development, typically by controlling access to chips, data sets or talent. Just above it is competition, where states compete to develop better models or control supply chains, supposing that dominance in AI offers the essence of long-term security and influence. Coordination comes next, a small but important attempt to set protocols that stop the destabilising escalation: the diplomatic hotlines in a space where misalignment between systems could lead to things we barely comprehend. Beyond that there is cooperation, where you turn over and standards start to converge in a way, safety regimes are shared and mechanisms for managing the risk at a collective level are put in place while capabilities still remain sovereign. And at the top, ultimately, cooperation - the mutual building of infrastructures, models or governance architectures that reflect a shared commitment to stewarding this technology in the service of public good rather than narrowly national ends.

### The Ladder of Sovereignty Engagement that Nations Climb





In classical sovereignty, nations climbed this ladder slowly and often grudgingly, usually in the wake of devastating failures of unilateralism. The 20th century’s institutional architecture – the UN, the WTO, the International Atomic Energy Agency, regional unions – was not born of magnanimity; it was born of realisation that anything else led to an anarchic world too dangerous and too brittle to endure. AI requires a similar reckoning, but this time the speed of change doesn’t provide the luxury of foot-dragging.

But it’s only natural that nations most able to chart the path to AI sovereignty will be those with massive computational resources, deep talent pools, and robust models ecosystems – economies which drift towards bottom rungs of conflict and competition. Their motivations are predicated on the idea that “winners win.” The more compute you have, the more data you can manage; the more data, the better your models; and those with better models win. This creates a structural temptation towards monopoly rather than sharing.

If the world remains caught in a race for the bottom of contestation and competition, we are likely to end up with an order characterised by instability, fragmentation and moral hazard. A planet in which each country rushes to scale models bigger and faster than its competitors is one where safety is the enemy of ambition. A world where a small number of powers control the dominant AI is one in which inequality ossifies into structural dependence. And a world of fractured standards across blocs is a world in which global markets splinter and risks are opaque and governance unthinkable. The tragedy of such a world is that it will have traded long-term security on the altar of short-term gain.

You should ideally move up the ladder, then, right? Coordination, no matter how minimal, ensures communication lines, without which crises multiply each other. Co-operating means that countries can share safety methods and conduct audits over practices; work on risk assessments so there is less of a race to the bottom. Cooperation makes room for shared infrastructures and public-good architectures that provide services to climate, health, education and low-resource communities. And in classical sovereignty as well, it was the combined labor of international institution-building that made it possible for states to overcome parochial fears and conceive of collective possibilities. AI requires an analogous institutional imagination, the kind that is not content to simply author power, but shape its path.

In this re-imagining, it is countries such as India and the UK which have a unique role. There the two are not hegemonies in AI as such they don’t see global governance as restriction on overpowering supremacy. But nor are they fledgling, having considerable technological capabilities and intellectual resources as well as convening power. Their histories and political cultures enable them to act across divides: India with experience engaging the Global South and in the construction of digital public infrastructures; the UK with institutional strength, leadership in safety dialogues, and as a player within the normative architecture of global governance. Both nations appreciate, in different ways, the subtle interplay between sovereignty and dependence. They consequently have an important role in how AI can be realised, balancing national ambitions and global obligations.

If sovereignty is to have a future rooted in the dignity and autonomy of political communities, rather than drifting inexorably toward a world where technological oligopolies displace democratic choice, nations will need to rediscover the virtues of restraint, cooperation and collective stewardship. In fact, the ladder is not an abstract theory - it’s how we maybe avoid those dark futures in a lawless AI playground. The question is whether the world as a whole has the wisdom to rise to it before events force us, yet again, to learn too late what we should’ve known at the outset – that sovereignty grows when we acknowledge our mutual fragility.

AI has changed geopolitics. But if politics is to still be a human enterprise, guided by judgment and not just computation, then we need to ensure that our institutions must embody our greatest aspirations rather than our smallest fears. The journey from contestation to collaboration is challenging, but it’s the only route that provides hope of a future in which technology enhances human liberation rather than limits it.

### 3.3 Digital Sovereignty Update and Literature

#### 3.3.1 Approaches to Sovereignty

The role of sovereignty in AI has come to the fore in 2025 as a consequence of geopolitical shift and concerns around dependency on a few companies from a small number of countries for AI and digital infrastructure in enterprise and public sector environments.

With this demand for “sovereignty” has come a recognition that it would be impossible to build today’s infrastructure or to replicate any infrastructure without reverting to open source. By its nature of allowing anyone to use the code for any purpose within the licensing of open source, the technology is globally collaborative (definitions five and six of the [Open Source Definition](#)). Challenges to open source ensue from the various concepts of sovereignty, with some seeking to exclude code from specific countries or to require the code to be locally created.

#### What is Sovereignty?

A fundamental challenge for all discussion on Sovereignty is the lack of a universal definition. Discussion of sovereignty is often ill-informed and at cross-purposes due to disconnect in understanding its meaning. The World Economic Forum reports in [What is digital sovereignty and how are countries approaching it](#) that Digital sovereignty, cyber sovereignty, technological sovereignty and data sovereignty refer to the ability to “have control over your own digital destiny – the data, hardware, and software that you rely on”.

In Germany, [Zendis](#), has a mission to “enable the administration to free itself from critical dependencies on individual technology providers”.

#### EU Approach

European policy and industry discourse increasingly link sovereignty to open architecture and standards. [Coverage of 2025 events](#) at the OpenForum Europe EU Open Source Policy Summit 2025 emphasises a public body shift towards open source stacks and sovereign clouds to mitigate vendor lock-in and geopolitical risk. [The EU AI Act](#) reinforces this. Although staggered in its application through 2026-2027, obligations started as early as 2025 and a dedicated AI office is operational. However, in recent publications it appears that the EU’s approach is shifting in the hope of simplification of regulation. Whilst the AI Act goes ahead with its application there are strong signals that the EU may not enforce it.

In recent leaked communications, a draft of the “Digital Omnibus,” a European Commission project to streamline EU regulation may potentially undermine the protections of GDPR in Europe. The formal text of the Digital Omnibus, is expected to be officially released on 19 November.

In the EU, the rise of [Eurostack](#) has been promoted as building Europe’s digital future, by creating localised infrastructure, which will exclude US technology. Eurostack has become very divisive in the open source community with some persuaded that localisation overrides the longstanding global nature of open source. A form of “local source” may be the outcome of this initiative. This risks losing many of the benefits of open source in infrastructure, which benefits originate in its globally collaborative nature.

It is noted that this report is to be launched on 18 November in Bangalore, in a panel at Bengaluru Tech Summit. Whilst we discuss sovereignty in Bangalore, in Berlin on the same day, the EU will see France and Germany co-host a [European Summit on Digital Sovereignty](#) in Berlin. “The summit will serve as a platform to advance Europe’s vision of digital sovereignty. It will be a starting point to mobilise European investment in strategic programs and align national and EU funds” and bring together public and private sectors.

On 13th November the US Mozilla Foundation released an open letter “[Harnessing Open Source AI to Advance Digital Sovereignty](#),” addressed to Presidents Macron and von der Leyen and Chancellor Merz, flagging to the “European Summit on the need for open source in Digital Sovereignty” signed by a group of 43 organisations it states “If digital sovereignty means creating a Europe that is resilient and benefits from choice, security, and self-determination, then open source is a critical force multiplier that enables Europe to do more with less.”

## UK Approach

The UK has taken a very different approach to sovereignty from the EU. Its July 2025, [Compute Roadmap](#). This looks to create sovereign, secure, and sustainable capability by supporting British companies to develop sustainable and secure compute technologies.

“In an era where artificial intelligence will underpin everything from economic competitiveness to national security, having sovereign capability in AI – and the compute infrastructure that powers it – is essential. Sovereign infrastructure allows us to protect sensitive data, direct resources toward national priorities, and ensure we remain resilient in the face of global instability and supply chain disruption. Beyond resilience, sovereignty is also about opportunity: it allows us to shape our own future, build competitive advantage, and grow high-value sectors that support jobs and innovation across the UK.”

The roadmap clarifies that “The UK’s approach to sovereignty in compute is pragmatic, strategic, and uniquely shaped by our place in the world. As a deeply connected country with long-standing partnerships with the United States, the European Union, and other global allies, we do not define sovereignty as isolation or self-sufficiency.” This has manifested in various international collaborations.

For the UK and India this has included both the [UK India Technology Security Initiative](#) and the recently launched [UK-India Connectivity and Innovation Centre](#).

The UK-US Stargate collaboration announced in September 2025 sees the UK partnering with the US to bring billions of dollars of investment in AI in the UK from some of the US’s biggest tech companies including Google and OpenAI. Notable in this is the investment in the UK’s NScale, the highest in any startup in history. This is driving to build a UK Hyperscaler which will inevitably be built on open source software.

As we finalised the content of this report on 14 November, DSIT announced that a [UK NL collaboration on technology](#) has been agreed to deepen ties on AI, quantum and semi-conductors.

## India Approach

In April 2025, India commissioned the Savram AI team to build a Sovereign AI. At this point it is unknown if this is entirely locally built technology or the localisation of international technology. The Government of India’s AI Mission announced an increase in the GPU Capacity for this from 10,000 to 40,000 GPUs in September.

### 3.3.2 The Sovereignty Literature

In a recent article, [Open Source AI: A Cornerstone of Digital Sovereignty](#), Hugging Face suggests that digital sovereignty is essential to democracy and security. This need is amplified by AI because algorithms increasingly influence work, policy, and even elections.

Governments must be able to audit, adapt, and direct these systems rather than depend on foreign or opaque technologies.

AI that is open provides the most transparent and trustworthy path to digital sovereignty. Unlike proprietary systems that conceal their training data and decision processes, the technology in open models can be inspected, modified, and hosted locally and truly open AI will also share its training data.

This could allow nations to ensure fairness, compliance, and stability while developing homegrown expertise. Projects such as OLMO2 and OlympicCoder show that open, collaboratively developed models can rival the performance of leading commercial systems while remaining fully transparent.

Open datasets like Common Pile v0.1 further ensure that AI is built on ethical foundations. Every dimension of the application of sovereignty - data, technology, infrastructure, and regulation - benefits when AI is open. Countries can fine-tune models on national data, run them on domestic infrastructure, and evaluate them under their own legal frameworks. Tools such as Hugging Face Transformers, LLaMA,

and Mistral already enable global communities to create AI that reflects local languages and priorities. Open source AI democratises innovation, distributes power, and strengthens independence.

Recent multi-country research from The Linux Foundation, [The State of Sovereign AI](#), reports that 79% of surveyed organisations regard sovereign AI as strategically relevant for long-term objectives such as national security and regulatory compliance; open source software is cited as the leading approach (81%) due to transparency and auditability (69%), reducing the risk of vendor lock in and opaque decision making.

Building on this, in The State of Sovereign AI report, The Linux Foundation emphasises that sovereign AI has motivations that extend beyond security and compliance to include data sovereignty (72%), economic competitiveness (48%) and cultural alignment (31%). Organisations increasingly view AI as a core which explains why 82% are developing customised solutions to maintain control over intellectual property and operational autonomy. Open source technology plays an important role here, offering freedom from vendor lock-in, transparency of training methods and access to model weights. This then enables rigorous auditing and adaptation to local contexts.

Importantly, The Linux Foundation reframes sovereignty as compatible with collaboration: 94% of respondents regard global cooperation as essential, particularly for foundation models and datasets (59%), suggesting that sovereignty is achieved through participation in open ecosystems. However, realising this vision requires overcoming barriers such as data quality and availability (44%) and technical expertise shortages (35%). These findings position open source as a governance and trust mechanism that underpins long term autonomy AI systems.

The growing strategic significance of open source technologies and AI across multiple domains. As The AI Alliance hosted a summer workshop in Zurich focused on Sovereignty and produced a report of this on 12th November, [Workshop Report](#). It emphasises that open source AI technologies have been seen already to transform industries and accelerate innovation across Europe and further. As a result of increased AI adoption, policymakers, researchers and institutional leaders should collaborate to address the complex policy, ethical, and governance challenges in a landscape that is constantly changing. By reinforcing digital sovereignty and enabling innovations in healthcare, fostering inclusive development in countries such as India, open source technology and software, as well as AI have become a pillar of digital transformation. However, this transition is not without challenges. With regulatory ambiguity, governance capacity and sustainability of open source ecosystems, there remain critical challenges to overcome. India’s mission-driven approach offers a compelling model for leveraging open source and AI to achieve developmental goals, while the EU’s regulatory leadership sets a precedent for aligning openness with accountability. As open source and AI continues to evolve, coordinated global efforts will be essential to ensure that its benefits are equitably distributed and its risks responsibly managed.

Open protocols and agentic systems, according to MIT Nanda, [The GenAI Divide - State of AI in Business 2025](#) discusses how emerging open protocols (e.g., Model Context Protocol, Agent-to-Agent) are positioned as enablers of cross-vendor interoperability in agentic architectures. Industry reports highlight these as ways to reduce platform lock in, supporting digital autonomy through composability and standardisation. Across jurisdictions, sovereignty favours open tooling to preserve inspection rights, portability and local deployment control. Recent work on [Aalap: AI Assistant for Legal & Paralegal Functions in India](#) highlights how open source models enable reproducibility and transparency, which are foundational to digital sovereignty. Their analysis of scaling laws and model documentation practices supports the argument that open tooling enhances auditability and control. However, challenges persist with governance capacity, ambiguity over what counts as ‘open’ for regulatory compliance.

The US’s Atlantic Council, published [It’s time to reckon with the geopolitics of artificial intelligence](#) on 11 November explaining “The world has entered the most consequential tech race since the dawn of the nuclear age, but this time the weapons are algorithms instead of atoms. Rather than a race to obtain a single superweapon, this is one to determine how societies think, work, and make decisions. AI is transforming not only the distribution of power around the globe but also the very nature of that power and how it will be exercised.”

“There’s little doubt that who wins this race will depend on who can produce the most advanced chips, the best models, the most potent computers, and the cheapest and most sustainable energy for a proliferation of purposes.”



## 4. AI's Data Opportunity

### 4.1 Building India's AI Future: From Open Models to Open Data

Rakesh Dubbudu  
Founder, Factly



As India accelerates toward the “AI for All” vision laid out in the [AI Governance Guidelines](#), two foundational questions define our readiness: who owns the data, and whose realities train the models. Sovereign LLMs and AI safety frameworks will be more effective than the western models only if the datasets feeding them reflect India's extraordinary linguistic, cultural, and socioeconomic diversity.

#### India Data as a Public Good

The guidelines rightly call for expanding access to “high-quality and representative datasets” through platforms like AIKosh and other platforms. However, the real gap lies in the Indic layer—the text, speech, and context that capture how Indians actually communicate and seek services.

Without strong local data, even sovereign models risk reproducing the blind spots of generic, Western trained systems. Consider a rural tele-health chatbot that misinterprets a Telugu idiom describing hypertension as a minor earache, or a ration-distribution voice bot unable to process dialects spoken by a linguistic minority. These are not futuristic hypotheticals - they are foreseeable failures of context. Building inclusive Indic corpora must therefore be treated as infrastructure, not a side project.

This demands long-term funding, research chairs, and state-level data partnerships to capture dialectal, agro-economic, and socio-cultural diversity. India's Bhashini initiative is a start, but it needs to evolve from language coverage to context coverage - linking linguistic data with domain-specific annotations in health, agriculture, education, and welfare.

#### Structuring the Public Data Commons

The second pillar is the availability of structured, open, and machine-usable public data. The government's emphasis on techno-legal mechanisms - from DEPA to data-sharing standards - is timely. However, for these systems to enable trustworthy AI, the underlying datasets must move from PDFs to clean, interoperable tables with schema consistency, and metadata. While the application layer of AI is glamorous and one that gets all the attention, unless the data grind is given its due, we may not make much progress. The hard, unglamorous work of cleaning, standardising, and documenting data determines how useful any AI model ultimately becomes. There are quite a few public and private platforms that already demonstrate how decades of fragmented government releases can be converted into usable time-series datasets across sectors. To scale such efforts, India needs fiscal and reputational incentives for ministries, think-tanks, and startups to contribute cleaned, open datasets—similar to carbon credits but for data openness and contribution. Public procurement could prioritise AI solutions that use officially licensed, well-documented datasets.

#### From Consumer to Contributor Nation

The new governance framework envisions India as a “leader in inclusive AI”. Achieving that will require shifting from adoption to authorship. A country of 1.4 billion cannot afford to remain just a downstream user of global models. Investing in Indian data commons, structured public datasets, and transparent AI evaluation pipelines will allow Indian researchers to fine-tune sovereign LLMs that understand our administrative, legal, and linguistic ecosystems better than any imported system. If India can couple its Digital Public Infrastructure with Open Public Data Infrastructure, we could move from being a testing ground for AI products to a trusted producer of globally benchmarked, context-rich AI models.

In essence, the openness debate must expand beyond open weights and open APIs to include open, contextual, and accountable data. Only then will India's sovereign AI stack truly speak the languages, and realities of its people.

### 4.2 Thought Leadership: The Need for Responsibly Sourced Open Datasets

Tarunima Prabhakar  
Co-Founder, Tattle



Early in the rise of LLMs, researchers at OpenAI empirically validated the scaling law for LLMs. The performance of the model improves with increase in the model size, dataset size, and the amount of compute used for training [Kaplan, 2020](#). This ushered a mad chase to build bigger models, trained on larger datasets and more compute.

While compute is materially constrained by availability of electricity and rare Earth metals, data is not. It would seem that data should be an easier resource to procure - data is seemingly everywhere - but access is constrained by legal, ethical, social, and political constraints. It is also the most contentious piece for openness in AI - even the most ardent open source advocates have to reckon with the challenges of procuring and opening data for training LLMs.

Big Science, an ambitious multi-country one-year project to democratise AI was able to collect 1.6TB of data to train the Bloom Model, [Big Science, 2023](#). Even by conservative estimates [YouTube adds more data than that every day](#). This data, while public, isn't legally available to entities other than Google for training models.

It is indisputable that models with open data are better for democratising knowledge, and enabling downstream adaptation, and innovation. But there are also unavoidable legal, ethical and structural constraints in getting to open datasets. The largest and highest velocity data source at present is that coming from personal handheld devices in the form of multimedia content and behaviour tracking. This personal data is held by a handful of companies. The competitive reasons to hold onto the data aside, the last few years have seen a reversal of efforts by platforms to share data externally. [Data protection regulations have been interpreted to restrict data for public benefit, even when wilfully consented to by individuals](#).

Efforts to aggregate and anonymise personal data to open it are not without risks, [Narayanan & Shmatikov, 2007](#). One of the largest open datasets used to train text to image models contained child sexual abuse material [Thiel, 2023](#).

When it comes to non-personal data, we hit structural constraints. One of the biggest holders of non-personal data such as geospatial information or administrative data, are local and national government bodies. [But governments collect data for operational reasons and without considerations for open access](#). Data is stored across departments, often in formats that make processing it challenging. Opening the data, especially with retroactive effect, requires political will and bureaucratic alignment. Some of the aversion may emerge purely from a misunderstanding around the legality of opening the data.

A national policy advocating for open public data can address some of the apprehensions and inertia in government bodies towards opening data, but such a policy must also be socialised across all levels of governance. Sandboxes or staged release of data can also help to adequately test for risks, before making the data entirely open.

In addition to opening existing data, there are also efforts in India to generate data specifically for the purpose of creating open datasets that can be used to train models. These are motivated by a desire to build models that are more representative of Indian languages and cultures.

While these efforts are notable, it is important that they consider the relations of reciprocity that open knowledge initiatives are built on. Existing data used to train LLMs - be it books, Wikipedia entries or social media content- served a purpose for the people who generated the data. Its deployment for training models is a secondary use case. In generating data for training of AI, initiatives must consider attribution and compensation of data contributors, even if the ultimate goal is to open the data as a public good.



## 5. AI, Healthcare and Openness

### 5.1 Open Source and AI in Health

The deployment of AI in healthcare is increasingly framed in terms of performance and efficiency but also in terms of openness, transparency and innovation through open source models. Commentary from Red Hat on [The influence of open source and AI in healthcare](#) back in May 2024 highlights how open source platforms can help unlock healthcare AI adoption globally. For example, the article notes that its open source platform (Red Hat OpenShift AI) helps ease barriers in healthcare settings by enabling diagnostic-image analysis and by enabling adaptation of models to local needs and quickly. They emphasise distrust of proprietary AI models in clinical settings due to lack of transparency and customisability.

From a macro-economic perspective, the Linux Foundation's 2025 report, [The Economic and Workforce Impacts of Open Source AI](#) gives some useful health sector data. It shows the global healthcare sector could gain US \$150-260 billion in value from AI by application across business functions. The report notes that although healthcare has significant productivity potential, actual adoption remains lower than in some other sectors. Importantly, they emphasise that open source AI can provide particularly strong benefits in health care by freeing up clinical resources, saving costs, and potentially increase efficiency through its ability to automate tasks and decision support, aid in diagnoses and detection of other symptoms, and predict clinical outcomes such as hospital wait times and ICU transfers. Key to this is that healthcare is one sector that needs to ensure its governance and regulation are transparent and provide clear assurances.

McKinsey's March 2025 report [Generative AI in Healthcare](#): Current trends and future outlook finds that 85 % of healthcare leaders surveyed in the U.S. are exploring or have adopted generative AI capabilities. The article emphasises that generative AI offers new capabilities for providers, payers and technology firms—yet also flags that many models remain in pilot or early stage rather than full deployment, and that governance, data-quality and interoperability remain significant hurdles. Tools such as LangChain and Llama Guard are being used for orchestration and security, though their integration into clinical workflows is still emerging.

Separately, open source tools are playing a foundational role in healthcare innovation. It enables reduced development costs, faster iteration cycles, and lower technical barriers for startups and researchers. Frameworks like GaNDF, as discussed by [MedTechNews](#), exemplify low-code, open source solutions that empower non-experts to build medical imaging models. Authors of The GenAI Divide: State of AI in Business 2025 published by [MIT Nanda](#) suggest that clinical models have seen minimal change but AI technologies are beginning to show potential in diagnostics, treatment planning, and public health analytics, particularly through pilot projects and research initiatives. Despite this progress, adoption of open source tools in healthcare and life sciences, AI uptake remains lower (46%) compared to sectors like tech and finance, McKinsey concludes in the Generative AI in Healthcare report.

There are some key themes in healthcare. First, openness enables innovation, adaptability and transparency: for example, open source models allow clinicians and researchers to inspect, fine-tune and validate models in context. Second, the healthcare context presents unique complexities: patient-safety, regulatory regimes, data-governance, privacy and ethical issues mean that AI adoption is slower and more cautious. The Linux Foundation report shows healthcare lags compared to other sectors globally. Similarly, McKinsey notes that generative AI in healthcare must contend with risks of bias, auditability and interpretability. Red Hat's commentary emphasises the need for flexible deployment in hybrid clouds and secure infrastructure to address regulation and localisation concerns. Third, governance and ecosystem matter: AI openness in healthcare needs strong frameworks for safety, transparency, interoperability and ethics.

### 5.2 Case Study: Thoughtworks

**Bahmni - an open source hospital management and electronic medical record system**

**Vanya Seth**  
Head of Technology, Thoughtworks

**Julien Deswaef**  
Regional Head of Social Change, Thoughtworks



Thoughtworks is a global technology consultancy that delivers impact by blending design, engineering and AI expertise. It has more than 10,000 employees worldwide, including about 3,000 in India. Thoughtworks is both a major user and contributor to open source software and actively contributes back to open source communities and builds tools that anyone can use. The company champions social impact through open source by building solutions for hospitals in resource-constrained environments and even recommending open source on large enterprise projects to deliver transparency, adaptability and sustainability.

#### The Challenge: barriers to digital healthcare

Hospitals in India and similar settings often rely on paper-based systems or costly proprietary software that simply doesn't meet their needs. There are many local challenges: unreliable power, lack of internet, low digital literacy and language diversity. When Thoughtworks was introduced to doctors at Jan Swasthya Sahyog (JSS), a rural hospital in Chhattisgarh, their team saw these challenges first-hand. They immediately understood the need for a flexible, affordable, and robust hospital information management system that could work offline and truly adapt to local realities.

#### The Solution: Bahmni's Open Source Approach

Bahmni is an end-to-end open source hospital management and electronic medical record system (EMR). It began in collaboration with JSS 12 years ago as part of Thoughtworks' social impact programme.

"Bahmni offers hospitals a turnkey solution for digital hospital management," explains Julien Deswaef, Regional Head of Social Change at Thoughtworks. "It goes from patients, to the lab, to the pharmacy, X-ray and anything that they need. It's fully open source."

Its real power comes from integration. Bahmni combines three open source systems: OpenMRS (medical records), OpenELIS (lab information), and Odoo (billing/ERP) – into a single, unified platform. This means hospitals are no longer forced to juggle multiple disconnected tools, which improves efficiency, reduces duplication, and supports better patient outcomes. Most importantly, Bahmni is designed for low-resource environments. It runs offline, which is a critical factor for clinics where connectivity is limited and power is unreliable. This is what delivers real impact in rural India and beyond.

"It doesn't need the Internet, it can be run off a laptop," says Julien. "That works very well for field hospitals that are completely disconnected, but it also works for large organisations."

#### Managing Data and Ensuring Interoperability

Open source is built on and de facto standards, but in health care, the stakes are much higher. Formal regulatory requirements must be met.

"When we started Bahmni, it was not interoperable with a lot of other open standards, and that's a challenge," explains Vanya Seth, Head of Technology for India at Thoughtworks. "That's why we integrated with SNOMED CT (Systematized Nomenclature of Medicine – Clinical Terms) and adopted FHIR (Fast Healthcare Interoperability Resources); so systems can play well with the ecosystem instead of being stuck in silos."

Beyond technical standards, Bahmni open source copyleft AGPL licence acts as "the glue" binding diverse open source components. The copyleft licence ensures that anyone who uses and modifies the code base must also give back their enhancements and modifications to the project.

## Impact: Empowering Hospitals and Communities

Bahmni fills a critical gap in a market dominated by proprietary systems. Its open source licensing eliminates vendor lock-in, which means hospitals retain full control of their data rather than having to tie it to a single provider. This flexibility allows them to decide where data is stored, how it's secured, and who has access, ensuring compliance with local regulations and long-term independence.

“There just aren't a lot of open source solutions like this out there,” says Julien. “In the healthcare sector for hospital management, you don't have a lot of choice. Bahmni fills that gap for low resource countries because it's robust, easy to administer and keeps costs low.”

The impact is clear: Bahmni is now deployed in over 500 hospitals across more than 50 countries, reducing errors, streamlining workflows, and improving patient flow. Its adaptability across languages and compliance with global standards like FHIR and SNOMED CT make it suitable for diverse contexts. Highly configurable, it lets hospitals tailor workflows quickly while ensuring safe data exchange through standardised formats and terminology.

“Bahmni is a very configurable software system,” Vanya explains “We designed for configuration over customisation so teams can set it up with limited technical skills and get up and running in local settings.”

By replacing paper systems, Bahmni also simplifies compliance and reporting, helping providers demonstrate impact to funders and regulators.

## Building a Community and Governance

Initially funded by Thoughtworks, Bahmni now sustains through paying customers and community contributions.

Its success is clear: Bahmni has been recognised as a Digital Public Good (DPG) and is part of India's Ayushman Bharat Digital Mission (ABDM). The Indian government's request for “Bahmni Lite,” a version for smaller clinics further demonstrates its official endorsement and adaptability.

In 2017, the Bahmni Coalition was established, to ensure its long-term future. It brings together organisations like the Médecins Sans Frontières (MSF), OpenMRS, BeeHyv, IntelliSOFT, Jembi Health Systems, Koita Centre for Digital Health, Nuchange Informatics, Possible Health, Tattva Foundation, and many others, all committed to advancing open source hospital management and EMR systems for low-resource settings.

Thoughtworks continues to play a leading role, but it is the coalition members who collectively provide governance, technical development, implementation support, and standards expertise. This shared model of resources and contributors makes Bahmni sustainable as an open source project that delivers the benefits of a Digital Public Good.

## AI Impact

Like many open source projects, Bahmni is pivoting to AI. In 2024, the team began a major rewrite of its back-end and front-end layers, using AI to migrate from a legacy tech stack to a modern architecture. The use of AI is focused on accelerating and automating the redevelopment process – improving maintainability, performance, and user experience. AI tools were used to generate code, refactor legacy components, and automate testing, tasks that would have taken months if done manually. The team relied heavily on open source AI tools, which highlights how critical accessible AI is for enabling rapid, equitable innovation in open source healthcare.

## Conclusion: Open Source Software for Social Good

Bahmni is a clear example of how open source software, driven by local passion and global collaboration, can increase access to healthcare.

It enables data sovereignty in a highly regulated and sensitive field. Ultimately, its governance and collaborative model are what makes this digital innovation sustainable for the good of all.

## 5.3 Case Study: Open Healthcare Network

**Gigin Chandy George**  
Co-Founding Engineer,  
Open Healthcare Network



The Open Healthcare Network (OHN) is a community-led open health initiative that develops and maintains the Care software (an open, Health Management Information and Electronic Medical record stack) to tackle some of the toughest challenges in healthcare delivery.

The project started as the CoronaSafe Network in Kerala during the early COVID response where it provided the “war-room” style dashboards, bed/capacity tracking, telemedicine/triage support, public literacy content and rapid deployment of care-centres, working closely with state authorities and local volunteers. Kerala was the incubation ground from which the open project and Care tooling expanded to other states. Today, OHN supports healthcare across 10 Indian states, from rural ICUs to palliative care programmes and AI-driven solutions.

## Funding and Collaboration

OHN operates on a mixed funding model: its core and community contributions are volunteer-driven and open source, while large-scale deployments are supported by philanthropic grants to implementation agencies. Partners such as eGov Foundation manage procurements, operational budgets, and maintain full-time engineering teams contributing to Care. Everything OHN does is rooted in openness and collaboration.

## Scaling Palliative Care Through Open Source

As Engineering Lead at eGov Foundation and Co-Founding Engineer at OHN, Gigin Chandy George has overseen Care's deployment across 200+ government hospitals in 10 Indian states. eGov Foundation is a major implementation partner, taking Care (including the 10BedICU model) to government hospitals at scale.

Care is built on modern, open standards like FHIR (Fast Healthcare Interoperability Resources), ensuring interoperability and clinical accuracy. “Care is fully open source and fully based on FHIR. The entire architecture is built in a way that it is AI-ready,” notes Gigin. Its plug-in architecture allows rapid customisation, supporting integrations such as TeleICU—a telemedicine model enabling remote monitoring and management of critically ill patients. Using real-time data and audio-visual communication, TeleICU connects off-site specialists with bedside teams, improving access to expert care in resource-limited settings.

Care also powers Kerala's state-wide palliative care programme. “Every government hospital or primary health centre in Kerala uses Care to reach homes and deliver palliative care across the state,” says Gigin. With 1,300 primary healthcare centres participating and 100,000 monthly home visits, Care's open source design makes scaling and adaptation easier for diverse healthcare needs.

## AI-Driven Innovation

AI is applied to optimise workflows and reduce friction. One standout feature is Scribe, which uses speech-to-text and large language models (LLMs) to turn doctor–patient conversations into structured EMR entries. This reduces data entry time, prevents gaps, and creates richer patient profiles. Multilingual support is being piloted—critical in India's multilingual context. LLMs also auto-draft discharge summaries, saving clinician time and improving continuity of care.

## Bridging Gaps in Rural Healthcare

The 10BedICU project exemplifies Care's impact. “We enable hospitals that don't have ICUs by bringing in medical equipment as well as tech so they can access care from urban centres,” explains Gigin. Through



TeleICU, local teams gain continuous access to remote intensivists and decision support. Standardised ICU protocols ensure consistent quality, while central dashboards track beds, oxygen, and ventilators to speed referrals and reduce unnecessary transfers. The platform also trains local staff and captures structured data for programme-level monitoring. Its open source model means hospitals and governments can deploy and customise the system at low cost, while philanthropic grants fund large-scale rollouts.

#### Community-Driven Development

An engaged volunteer community drives OHN's progress. With 1,000+ contributors to the core codebase and a wider Slack community of nearly 5,000 members, including developers, clinicians, and administrators, "It's primarily volunteers who want to either write code or...support that deployment," Gigin explains. the community resolves issues and advances the platform's capabilities.

The MIT licence guarantees the software remains open source and allows governments to deploy and modify it without vendor restrictions, ensuring full control and sovereignty over digital infrastructure.

#### Overcoming Challenges

OHN's journey has faced some obstacles along the way, including fragmentation in data collection. Each programme, whether an ICU programme (10BedICU), a palliative care programme, a state-level HMIS roll-out, or a disease-specific programme run by a state health department, requires its own forms and data sets. These variations arise from local clinical practices, government reporting requirements, and programme indicators. In some cases, even individual hospitals need customised configurations.

Care's modular architecture addresses this complexity by supporting custom forms and modules while maintaining shared standards such as FHIR for interoperability. As Gigin notes, many early challenges were solved by "building the code based on standards rather than patching individual issues." Care was re-architected to adopt FHIR and standard clinical terminologies based on insights from early implementations. This approach made the system flexible enough to meet local needs while remaining consistent for nationwide use. Interoperability and data consistency are critical in healthcare.

By adopting FHIR and standard terminologies, Care ensures that patient information flows seamlessly across hospitals, labs, and pharmacies—reducing errors and improving continuity of care.

#### Impact and Recognition

Recognition of Care as a Digital Public Good (DPG) has accelerated adoption and community growth. The initiative has grown into a recognised model for public healthcare improvement, highlighted by major tech leaders and featured in global AI forums. OHN's impact shows in how widely it's used across different regions and how it has shaped the way healthcare data is collected. It's now seen as a model for open, AI-enabled healthcare programmes around the world.

#### 5.4 Fireside Chat: Open Technology for Good

**Vanya Seth**  
Head of Technology, India  
Thoughtworks



I am the Head of Technology for India at Thoughtworks and I have been with the company for over a decade. When I first joined, I was struck by the company's completely different way of thinking about technology. It went beyond building systems and was about being accountable for our impact on society. At Thoughtworks, we are deliberate about building ethically sound, robust platforms and understand that technology is a powerful tool with real consequences. That focus on social and economic justice and the idea of putting others above self is a foundational characteristic that makes Thoughtworks different.

#### How did working on open source projects shape your approach to technology?

I started my career in proprietary product organisations, where open source was an alien concept. My first open source project was working with Médecins Sans Frontières (MSF) on a health information system (called DHIS2) developed by the University of Oslo and the experience changed my perspective completely.

What struck me was the diversity of the community. I saw people from many backgrounds united by the singular passion to solve problems in their own contexts. That's when I saw what "tech for good" could mean in practice.

I have seen communities using this technology to improve the lives of populations often left behind by digital systems. That health system, for example, is still being used in places with minimal digital infrastructure. Think of remote areas or conflict zones where MSF sets up field hospitals where one can't just deploy a cloud service. In such low-resource environments, the tech has to work offline and people often have extremely low digital literacy.

The experience taught me the most valuable lesson of my career: technology must adapt to its context, not the other way around.

#### How has Thoughtworks shaped your perspective on openness and collaboration?

At Thoughtworks, we've always been strong advocates for open source. Even on large enterprise projects, our first recommendation is usually open source precisely because it delivers transparency, adaptability and sustainability. When we architect solutions, we prioritise open source components. We do this because communities maintain and evolve these systems over time, which reduces the burden on our clients and ensures long-term viability. This approach is visible beyond our client work. We actively contribute back to open source communities and build tools that anyone can use. For me, "openness" is about creating equitable access to technology and empowering communities to innovate without barriers.

#### What are the biggest challenges and enablers for data sharing and interoperability?

Interoperability is context-specific, but in healthcare, it's critical. When systems don't comply with open standards, they can't "talk" to each other and that creates dangerous data silos.

That's why we integrated the Bahmni open source healthcare solution with global standards like SNOMED CT (Systematised Nomenclature of Medicine – Clinical Terms) and FHIR (Fast Healthcare Interoperability Resources). These standards are what ensure systems can exchange data safely and effectively.

At Thoughtworks, we treat interoperability as a first-class concern, not an afterthought. Our philosophy is to always comply with open standards rather than invent something proprietary. This commitment to safe data sharing isn't just for healthcare but is essential for any citizen-scale initiative where good governance depends on combining multiple data sources.



**How do you see AI and open source working together for social good?**

When AI and open source come together, innovation can accelerate for everyone. Proprietary tools are prohibitively expensive, which shuts out smaller organisations and open source communities. Granting these communities access to AI tooling, free or subsidised, is the only equitable way for them to enhance the platforms they're building.

This is a clear opportunity for the industry to step up. A genuine move forward for the 'tech for good' agenda would be providing credits or low-cost access that will empower communities that can't afford enterprise-level solutions.

**What role does open source play in emerging technologies like AI?**

Open source is the critical path for AI adoption at scale. Proprietary AI tools are expensive and inaccessible to smaller organisations or public sector initiatives. Open-sourcing models, datasets and training code empowers communities to build solutions that reflect their local needs.

For example, we've worked on Vakyaansh, data crowdsourcing platform, in collaboration with Ekstep. The aim was to build Indic language models for automatic speech recognition, unlocking voice commerce in Indian languages. More than half of India's population doesn't speak English, so this work is essential for inclusion.

Today the model suite supports 23 Indian languages. All of this is open source; models, data, and training code - because openness is the only way to scale AI equitably.

**Why is openness so important for the future of AI?**

Putting technology and AI, in particular, behind a paywall is not a viable path to mass adoption. If we truly want to reach people who lack language skills or financial resources, open source and government-backed initiatives are the only way forward.

India is a great case study for this in action. The national Sovereign AI strategy is driving the creation of homegrown models, hardware and chips. Partnerships with NVIDIA and local GPU infrastructure providers are one of the first steps toward creating language models that truly honor India's vast linguistic diversity.

**How do you see the link between technology and social impact evolving?**

Technology for social good is about understanding context, listening to communities and designing for inclusion. Open source enables this collaboration across borders and sectors, turning technology into a shared resource for solving humanity's biggest challenges.

**5.5 Fireside Chat: Building Trust Through Open Standards**

**Brian Bishop**  
**Founder & CEO,**  
**Data People Connected**

**About Data People Connected (DPC)**

We are an SME in northwest England focused on smart cities and digital twins, driven by creating Social Good through data. With a background in electronics engineering, I apply interoperability principles to data and software delivery, advocating open standards and open source. For the past four years, I've led open standards work as President of the Open Connectivity Foundation, advancing IoT security and national cyber-physical infrastructure.

We use the concept of a digital spine to enable interoperability across data models, transmission, and integration, forming high-quality information frameworks essential for smart cities. Despite challenges as a small company competing with large corporations, our mission remains to build foundational systems that make smart cities possible, because without the digital spine, you cannot be smart.

**Which healthcare standards have you worked with or contributed to?**

We set out to build a mesh network in a deprived community within the Liverpool City Region Freeport zone, bringing together data on pollution, traffic, and health to understand how local decisions affect people's lives. One of the hardest parts was pulling data from so many different sources, each with its own models and terminology. That challenge pushed us towards open standards. Working with Alder Hey Children's Hospital, we focused on respiratory disease in children and explored standards like HL7, FHIR, SNOMED, OpenEHR, and OMOP. We wanted to make health data easier to share and use, so we could combine it with environmental and social data to get a clearer picture and support better decisions for the community.

The goal was to create a workflow model rooted in trust, using sensor data that could be securely transmitted into an integration architecture and then shared. It quickly became clear that the real challenge wasn't collecting the data - it was working out how to share it effectively.

While working with Alder Hey, we also worked closely, with Liverpool John Moores University, Oxford's Big Data Institute, and Professor Jim Davis, on validating data pipelines to ensure trustworthy insights. It was clear that if we could validate data end-to-end, that would reduce challenges to the insight. Reliability is key, even if the outcome is not the desired expectation the fact that you trusted the data means you applied a code of practice that is agreed upon. More importantly as this feeds into the digital twin concept you create feedback loops and change the parameters of the workflows you have initially generated. If you validate data end to end, that's how you build better applications, better hardware, and more importantly, a trustworthy environment.

**How comfortable is the NHS and the UK with open source and standards?**

Of course we come up against those advising at high levels about the risks of open source and spreading misinformation. One of the challenges of openness is that there are so many people without clear understanding that smoke and mirrors are easy.

Obviously security concerns are easily contested. Security and in particular security around sensitive data is a software challenge not an open source one. There have been numerous data breaches in proprietary systems. The challenges and benefits in each proprietary and open source software are just different. In my opinion trust can only be built through openness and the transparency it enables. If you create castles, castles can still be breached in this day and age and moving data in and out of them becomes difficult and costly.

## The role of AI

AI adoption today comes with a level of concern across two main areas: ethical use; and bias. What you don't want is large organisations using AI to create bias toward their own markets. AI has an important role - it should take away mundane tasks and reduce human error by implementing good processes.

That role feeds into the digital twin schema, and makes better processes based on validated data to create the right information? If you build systems using semantic and contextual interoperability, based on ontologies and open standards, you can trust what comes from sensors and databases. It's federated and translatable into information and gives the AI model quality data to work with, rather than interpreting something unreliable. That's why we need strong foundations. Without them, AI can't deliver trustworthy outcomes.

### How do you plug these things together to become a standard for usability?

At Data People Connected, we're working on medical sensors, like a blood oximetry sensor designed to produce the manufacturer requirements necessary to comply with NIST, using the data models and ontologies we provide, which are in effect the standards. And these are open. By doing this, we're giving SMEs and businesses anywhere in the world a roadmap to deliver something standardised that plugs into a digital spine and is interoperable through this openness. Instead of pulling all the data into a central system, we extract it from the root of trust, so the data stays where it should and the patient can then provide consent for its use and federate it. We believe policy-based access control is the best way forward. If you design policies that define consent, not just for personal care but for trusted research environments, you can support better diagnosis and support future health concerns. It always comes back to building those foundations first.

### Does initial consent for data use in a healthcare system cover all subsequent uses by both human and AI agents throughout the patient's care journey?

To be effective you need both reactive and proactive workflows. Policies can include flexibility, like a 'break glass' moment in emergencies, where medical staff can access data to save a life. This is a common term in the NHS, just like an emergency fire switch. The glass is a protective mechanism but is transparent. It says don't just press this switch unless it is an emergency - then you can break me. That capability has to be built into the policy framework, it's about creating a digital twin of processes, to make life better using the data that it's being fed, and that we can trust.

### Final thoughts

The platform forming the digital spine is being open sourced. From a commercial perspective people might look at that and say, 'No wonder you haven't got the investment you want, because you're turning it into an open source tool.' And my response is: somebody has to! Society needs this. We've invested a lot of money into this, and are comfortable that we will build commercial models on top of our digital spine.

We've also benefited from open source as we built this, using Node JS. We have a vision to rebuild it in Rust as the enabler to scale globally due to its memory safety benefits. I've been speaking with Matt Fitton at Kings who's working on interoperability of data for medical devices using Rust. He has been interviewed by OpenUK for a report in the past. Imagine our open source digital spine being used with his work across medical devices built on Rust; you'd have security embedded, faster data translation, and scalability.

That's a strong starting point.

From a Data People Connected perspective, we were probably six years ahead of our time. Now organisations are moving toward what we've been focused on. We'd love to work with the Rust Foundation in the future and how they could help us deliver.

One final point, we've talked a lot about software, but hardware matters too. With regulations like the Cyber Resilience Act coming down the line, you have to think about hardware Bill of Materials, Software Bill of Materials, everything.

In healthcare, trust isn't just about the data; it's about every element in the pipeline and supply chain. We call them nodes; each device or component is a node. For me, the way forward is ensuring every node is trustworthy as data passes through it. That's how you build confidence in the entire ecosystem.

## 6. What the data tells us about AI Openness

### 6.1 Literature Review

[The McKinsey report, Open Source Technology in the Age of AI](#) shows that 63% of organisations use open source AI models. Adoption is the highest in tech, media and telecoms at 70%. Developers report high satisfaction - 81% - and lower implementation costs - 60% - and maintenance costs - 46%, compared to proprietary tools. However, proprietary solutions still dominate in time-to-value efficiencies and ease of use for less experienced teams - while they see that open source AI has lower implementation and maintenance costs, they believe proprietary tools are easier to adopt. Respondents from organisations that see AI as important to their competitive advantage are more likely to report using open source AI models and tools than from organisations that do not see this strategic advantage.

Recent data from [GitHub's 2025 Octoverse Report](#) shows that 1.1 million public repositories now use an LLM Software Developer Kit (SDK), a software package that helps developers build, fine-tune, deploy and interact with LLMs without needing to design everything from scratch, with nearly 700,000 LLM SDKs created in the past year alone (+178% YoY).

GitHub Copilot has become a default tool with 80% of new developers using it within their first week. This is important - by removing cost and skill barriers, AI-assisted coding tools democratise access to programming, expanding participation globally. Newcomers using Copilot makes AI collaboration the new baseline for development. This reshapes productivity, learning, and open source contribution patterns, accelerating innovation while raising new questions about authorship, governance, and digital inclusion. This is a redefinition of the entrypoint to software creation and will impact the shape of the developer community over time.

This surge coincides with TypeScript overtaking Python and JavaScript as the most used language on GitHub. This reflects a shift toward typed languages that support agent-assisted coding. These trends underscore a structural transition toward agentic systems and, as the report says, AI isn't just changing the speed of coding, but also influencing which languages teams trust to take AI-generated code into production.

### Infrastructure and agentic architecture

Open source infrastructure is foundational to agentic development, replacing applications with interoperable agents which are capable of autonomous negotiation and coordination across platforms. Protocols like the open Model Context Protocol (MCP) developed in London by Anthropic and Agent-to-Agent (A2A), developed by Google and the Linux Foundation, enable memory, interoperability and decentralised intelligence. MIT's NANDA initiative as discussed in [The GenAI Divide - State of AI in Business 2025](#) further builds on these to support distributed agentic systems at scale.

### Governance and risk

The shift from static tools to learning-capable, customisable AI systems inevitably raises new governance challenges. Ambiguity surrounding licensing, supply chain vulnerabilities as well as the difficulty in identifying truly open models can complicate adoption. As mentioned in the report [The Rise of FOSS in India: Empirical Evidence and Insights from Cross-Sectoral Case Studies](#), by various authors at The National Law School of India, Software Bills of Materials (SBOMs) and dependency scanning are increasingly recommended to manage risk. In the UK the [TAIBOM](#) initiative seeks to implement this structure for AI.

Open source technologies and AI are central to next-generation architectures and expertise control strategies. Hybrid models dominate, balancing flexibility and speed. [Large Language Models \(LLMs\) are gaining increasing significance](#) discusses how the transition to agentic systems and neuro-symbolic loops underscores the importance of open protocols, ontologies and reproducible pipelines. In this context, reproducible pipelines ensure that the processes behind AI systems — from data preparation to model training and deployment — can be reliably repeated, audited, and verified by others. When open source and agentic AI systems interact within complex, hybrid architectures, reproducibility becomes essential for trust, governance, and control of expertise.



IBM has discussed in [Open-source AI in 2025: Smaller, smarter and more collaborative](#) how the trajectory of open source AI is shifting towards integrated systems encompassing classifiers (AI models that categorise or label data based on learned patterns), parsers (tools or models that analyse and structure unorganised input, such as text or code, into a form machines can process), and multimodal capabilities (the ability of an AI system to process and reason across multiple data types — text, image, audio, video, or sensor data - within one architecture). IBM forecasted that 2025 will see open source AI systems becoming more collaborative and system oriented. This evolution was expected to enhance interoperability and accelerate innovation through shared frameworks and reproducible pipelines. This largely is true - by now, most major open source AI ecosystems (e.g., Hugging Face, Mistral, Stability AI, Meta's LLaMA community) have moved toward integrated, multimodal models, smaller, energy efficient architectures optimised for local or edge deployment, and collaborative, system-oriented frameworks built on shared datasets, reproducible pipelines, and open standards.

These trends align with enterprise priorities for flexibility and speed, as well as reinforcing transparency and trust through open protocols and ethical auditing tools mandated by regulations such as the EU AI Act. These are publicly defined technical standards that allow different AI components - models, data services, APIs, or auditing tools - to communicate and interoperate consistently. They are the connective tissue that makes diverse, open AI systems interoperable, auditable and trustworthy across organisations and jurisdictions.

Economist Impact's report, [Open sourcing the AI revolution](#), underscores the transformative potential of open source AI in democratising access and fostering global collaboration. It recognises that two thirds of large language models released in 2023 were open source. This shows a structural shift toward openness as a driver of innovation and competitiveness. Open source frameworks empower organisations to build application ecosystems on top of foundation models, promoting linguistic diversity and mitigating harmful content. Effective adoption requires robust governance, high-quality data and expertise in tuning these models for domain specific contexts.

The data suggests that global AI development is progressing rapidly. GitHub's Octoverse report suggests that the past year showed the fastest absolute growth, that is the total increase in quantity, in developers. Today there are more than 180 million developers on GitHub.

Further, Octoverse's data shows that developers are using AI and agentic tools to build and share their work faster and agents are starting to show their impact, expecting far greater activity in the months and years ahead. As the report succinctly and importantly states, "It's about the evolution of developers in the AI era where they orchestrate agents, shape languages, and drive ecosystems. No matter which agent, IDE, or framework they choose, GitHub is where it all converges."

### 6.1.1 Hugging Face Data

Drawing on [Hugging Face's Hub Stats](#), we see high-level insight into how the Hugging Face Hub is evolving in terms of content and engagement. The cumulative view gives a big-picture trajectory: you can see a continuing upward growth.

Looking at the graphs included below, the first shows a cumulative count over time. It stacks the monthly figures to display the total number of models, datasets, and spaces published up to each point in time. This reveals overall adoption trends and highlights when growth accelerated or stabilised.

#### Hugging Face Cumulative Hub Growth to Oct 2025

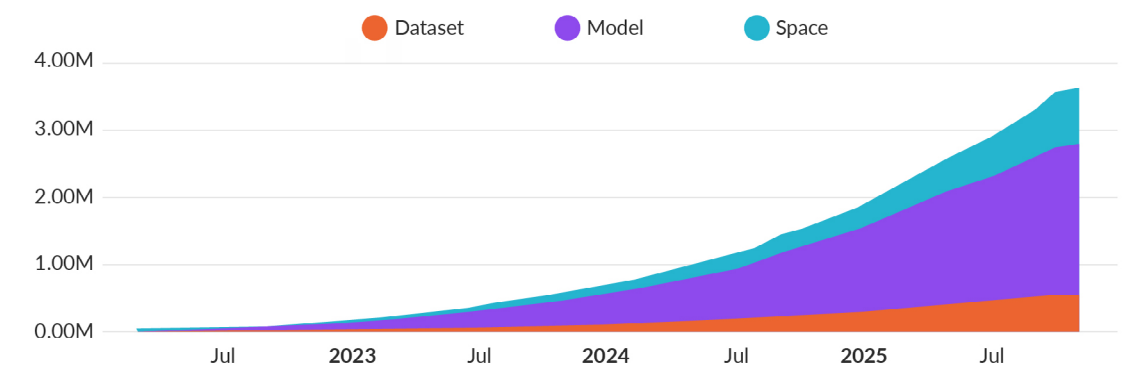


Figure 4  
Source: Hugging Face

The second graph plots new creations per month on the Hugging Face Hub - categorised into models, datasets, and spaces. It shows how many of each type were added month-over-month. Growth spurts, plateaus, or slowdowns in each category (dataset, model, space) on the platform are easily identified but follow the overall growth over time. In both of the above Hugging Face graphs, the data continues to trend upwards from July 2025 until October 2025.

#### Hugging Face Models, Databases and Spaces Created by Month

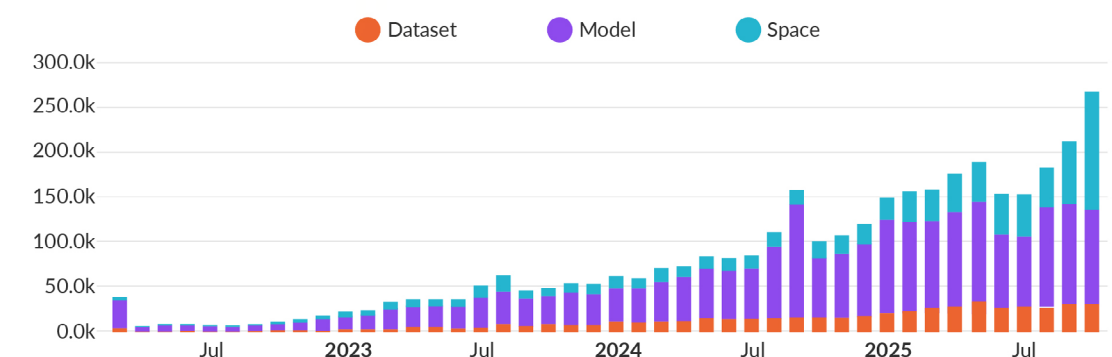


Figure 5  
Source: Hugging Face

6.1.2 Country Data

Looking at all open source repositories with 1k+ GitHub stars on a global ranking basis, we see the US leading with China trailing in second place with slightly less than half of the repositories that the US has. The UK is fourth globally following Germany in third place. The country is understood through contributors - location of the top contributor is taken to be the location of the repositories. If there is no location on the top contributor, then the stated location of the next highest contributor is used.

Number of Repositories with 1K+ stars

In association with  
Runa Capital

Country	Repositories with 1K+ Stars
United States	14649
China	6937
Germany	2243
United Kingdom	1976
France	1373
India	897



Figure 6  
Source: GitHub, Sept 2025

In terms of growth in the last quarter, the contributor data shows India leading in growth of contributors by country in the last quarter (May to September 2025) at 10.2%

Followed by the others that range from 6% growth in the UK (being the lowest) to 8.7% growth in China.

Contributors with 1+ Commit by Country, Growth in Last Quarter

In association with  
Runa Capital

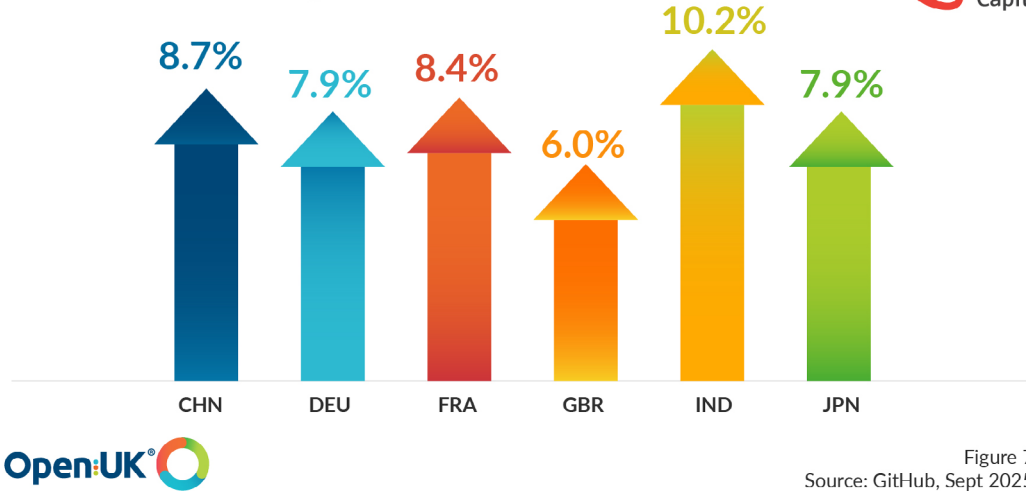


Figure 7  
Source: GitHub, Sept 2025

Top Developer populations on GitHub

Drawing from GitHub data, the following tables show the comparative developer count from 2024 to October 2025. During 2025, Japan moved into 6th place from 9th in 2024 whilst Russia moved to 9th.

Otherwise all countries remain in the same position and demonstrate significant growth among each country.

Top Developer Populations on GitHub 2024-25

Rank	Country	2024 Developer Count	Rank	Country	2025 Developer Count
1	United States	23.5M	1	United States	28M
2	India	16.7M	2	India	21.9M
3	China	9.8M	3	China	10.7M
4	Brazil	5.4M	4	Brazil	6.9M
5	United Kingdom	4M	5	United Kingdom	4.8M
6	Russia	3.6M	6	Japan	4.5M
7	Germany	3.6M	7	Germany	4.4M
8	Indonesia	3.5M	8	Indonesia	4.37M
9	Japan	3.5M	9	Russia	4.16M
10	Canada	2.9M	10	Canada	3.46M



Figure 8  
Source: GitHub

Contributors and Contributions to public repositories

The global landscape in open source activity, according to Github's [Octoverse 2025](#) shows that India has emerged as the world's largest base of public and open source contributors, driven by its rapidly expanding developer community and growing commitment to open source adoption. The United States, while having fewer contributors overall, still leads in total contribution volume, indicating higher individual activity levels. Brazil, Indonesia, and Germany form the next tier of leading nations — with Brazil showing strength in both participation and output, and Indonesia's rise into the top five underscoring how emerging regions are increasingly shaping the global open source landscape.



Top 10 countries by Contributors and Contributions to Public Repositories Oct 2025

Contributors		Contributions	
1	India	1	United States
2	United States	2	India
3	Brazil	3	Brazil
4	Indonesia	4	Germany
5	Germany	5	United Kingdom
6	United Kingdom	6	Korea
7	Russia	7	France
8	Japan	8	Canada
9	France	9	Japan
10	Canada	10	Russia



Figure 9  
Source: GitHub, Oct 2025

6.1.3 Global AI Repositories

AI Repositories with 1k+ stars globally

Turning specifically to AI repositories with 1K+ stars, we see the US leading with 1,186, up from 867 in September 2024; China at 633, previously at 519; the United Kingdom at 149, previously 113; Germany at 133, previously 118 (although we note that Germany has gone down by one AI repo with 1K+stars since May 2025); France at 76, up from 58 previously; and India now at 60, growing from only 40 just one year ago. India is today showing the biggest global growth.

Number of AI Repositories with 1K+ stars

Country	Repositories with 1K+ Stars
United States	1186
China	633
United Kingdom	149
Germany	133
France	76
India	60



Figure 10  
Source: GitHub, Sept 2025

Global Top 10 AI Repositories with 1K+ stars globally

This is the global “top 10” AI repositories that have 1K+ stars and are labeled as AI Topic = True.

Importantly for the UK, Significant-Gravitas/AutoGPT, based in Scotland, sits at number one globally.

Top 10 AI Repositories Globally

In association with Runa Capital

Rank	Repo name	Repo description	Stars
1	Significant-Gravitas/AutoGPT	AutoGPT is the vision of accessible AI for everyone, to use and to build on. Our mission is to provide the tools, so that you can focus on what matters.	179599
2	AUTOMATIC1111/stable-diffusion-webui	Stable Diffusion web UI	158106
3	ollama/ollama	Get up and running with OpenAI gpt-oss, DeepSeek-R1, Gemma 3 and other models.	155707
4	n8n-io/n8n	Fair-code workflow automation platform with native AI capabilities. Combine visual building with custom code, self-host or cloud, 400+ integrations.	155276
5	huggingface/transformers	Transformers: the model-definition framework for state-of-the-art machine learning models in text, vision, audio, and multimodal models, for both inference and training.	152364
6	langchain-ai/langchain	The platform for reliable agents.	119337
7	langgenius/dify	Production-ready platform for agentic workflow development.	118558
8	open-webui/open-webui	User-friendly AI Interface (Supports Ollama, OpenAI API, ...)	114824
9	comfyanonymous/ComfyUli	The most powerful and modular diffusion model GUI, api and backend with a graph/nodes interface.	93237
10	opencv/opencv	Open Source Computer Vision Library 2012-07-19 2025-11-11 opencv.org opencv.org https://github.com/alalek	84820



Figure 11  
Source: GitHub, Sept 2025

## Countries with the Most Contributors to Generative AI Projects 2025

Looking to the top 10 countries with the most contributors to Gen AI projects in 2025, there are some changes from 2024 to 2025. Whilst the US continues to top the charts with their contributors growing from about 78,000 to 1.7 million over the year. India continues in second place surging from just under 30,000 contributors to Gen AI in 2024 to 695,000 in 2025. Also notable is that Japan has gone from sixth place to third.

### Top 10 Country Contributors to Generative AI Projects 2025

Calculated based on contributors by region to generative AI projects on GitHub

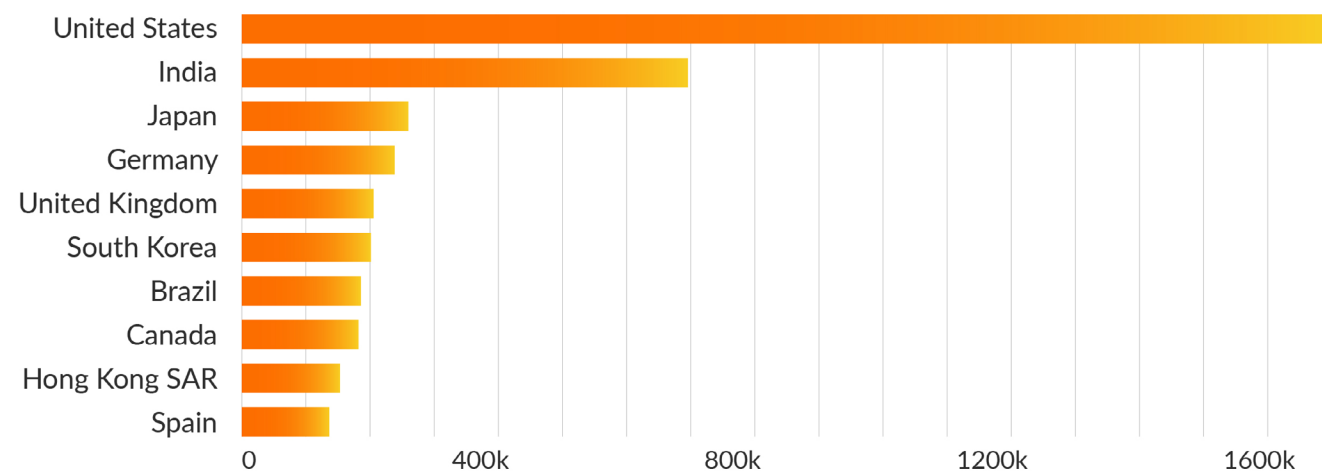


Figure 12  
Source: GitHub, Oct 2025

## Global Growth in AI Repositories

When it comes to a consideration of national growth in AI repositories, the UK's 32% growth in AI repositories with 1k+ stars over the past year gives them 4th position globally. In the last quarter alone, the UK grew 10%. In May 2025, the order of growth was India, France, US, UK, China, and Germany. Now, as of September 2025 looking over the past year we find that India continues at pace with 50% growth in AI repositories, followed by US (37%), UK (32%), France (31%), China (22%), and Germany (13%).

### Growth in AI repositories with 1K+ stars Sept 2024 - Sept 2025

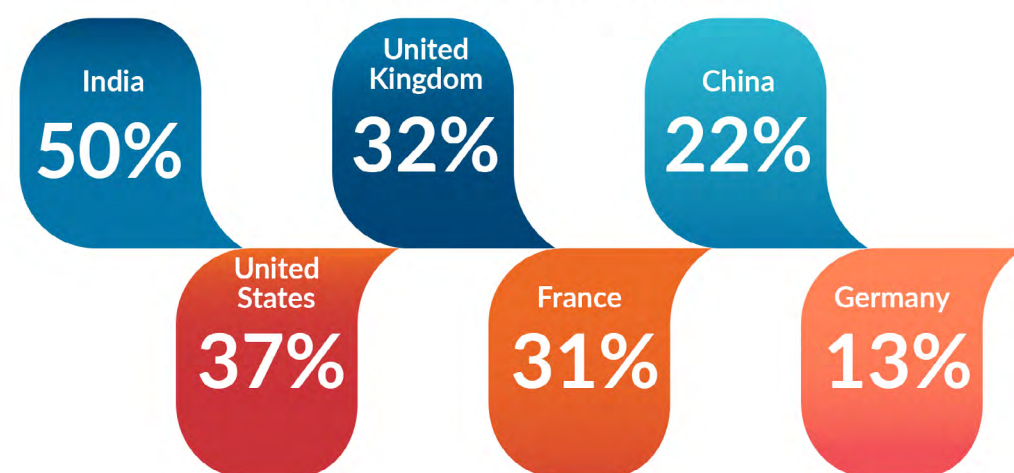


Figure 13  
Source: GitHub, Sept 2025

## 6.2 Europe - the EU and UK

The figures in Europe see a very significant shift on 2024's data across Europe and in the global landscape.

### 6.2.1 AI Repositories in Europe

A comparison of the number of AI repositories across Europe with 1k+ GitHub stars broken down by those hosted from the UK and those hosted from the EU sees the EU's increase to 556 whilst the UK increases to 135.

### AI Repositories across Europe

In association with  
 Runa Capital



Number of AI repos with  
1k+ stars in EU



Number of AI repos with  
1k+ stars in UK

Figure 14  
Source: GitHub, Sept 2025

## Growth figures

In September 2024 we saw 484 AI repositories with 1k+ GitHub stars in the EU and 113 in the UK. One year on we saw 588 such repositories in the EU against 149 in the UK. EU AI repositories have grown by 22% whilst the UK sees a 32% increase over the past year.

### Growth in Number of AI Repositories with 1K+ stars in Europe in 2025

In association with  
 Runa Capital

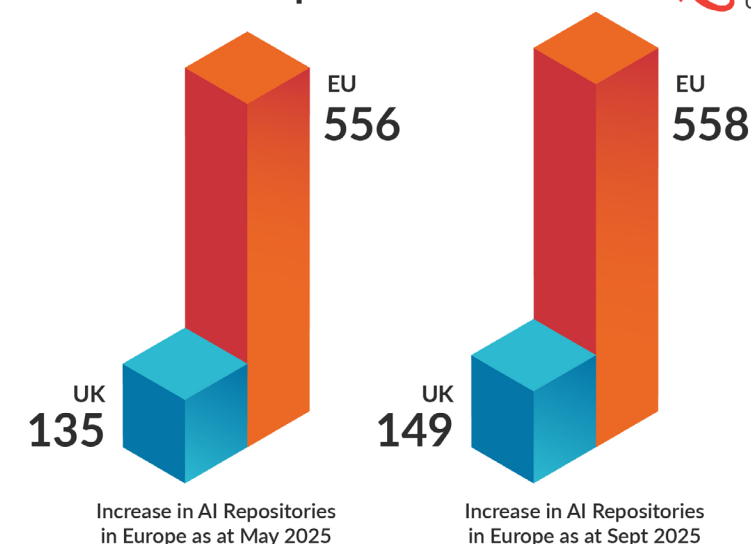
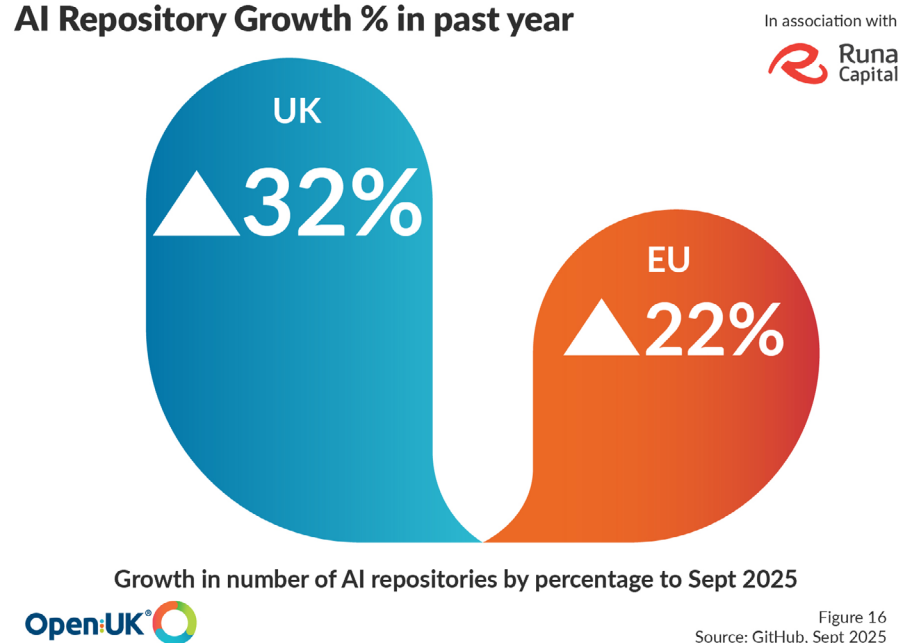


Figure 15  
Source: GitHub, Sept 2025



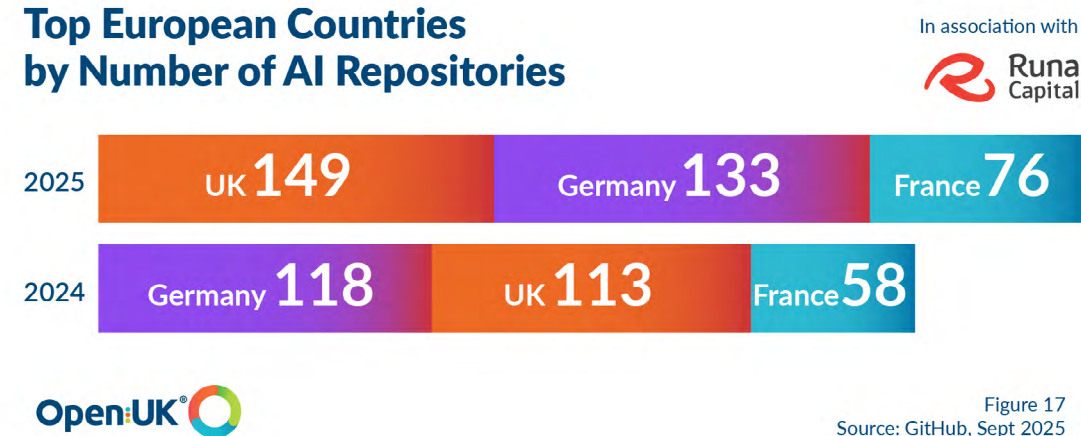
### AI Repository Growth % in past year



### Top 3 European Countries by Number of AI Repositories

Delving further into this GitHub data we see the positioning of the top 3 countries in Europe: The UK was at 135 in May 2025 and is now at 149; Germany was at 134 in May 2025 and is now 133; and France was at 73 in May 2025 and is now at 76.

### Top European Countries by Number of AI Repositories



### 6.3 The US

The US [AI Action Plan](#) positions AI as a critical driver of US economic growth and national security, likening the AI race to the space race.

In 2025, US policy on AI has entered a markedly different phase. The Trump administration has moved decisively away from the regulatory caution of the Biden years, adopting what many in Washington now call a “green-light strategy” which rewards speed, competitiveness and innovation above precautionary oversight.

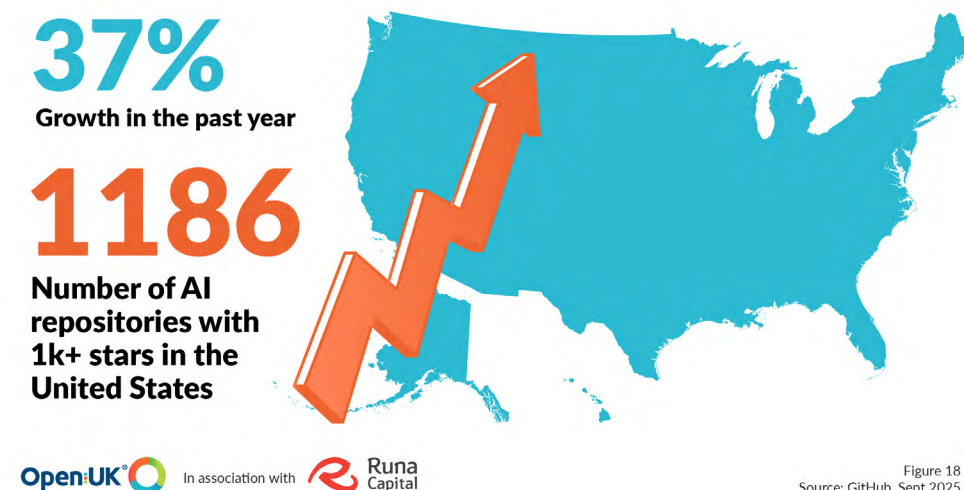
According to [White and Case](#), The administration repealed President Biden’s wide-ranging Executive Order on AI and rolled back the AI diffusion rule, which had imposed export controls on certain closed-source models. These steps were framed by the [White House](#) as clearing “bureaucratic red tape” to ensure the United States could “lead the world in AI innovation”.

As discussed by [Open Source Initiative](#), at the heart of this approach is an emphasis on open-weight models - systems whose parameters can be inspected, adapted and redeployed. Open weights are now seen as essential to U.S. technological sovereignty, enabling a more distributed innovation ecosystem while reinforcing domestic control of the AI stack.

Yet deregulation has been coupled with a sharpening of national security priorities. Following the release of China’s DeepSeek R1 model in late 2024 - described by Fortune as a “Sputnik moment” for AI as above - debate in Washington shifted from existential risk to geopolitical rivalry. Congressional committees have since explored tighter controls on the export of intangible AI technologies such as model weights, training data and research code. At the same time, the administration has expanded initiatives on synthetic-media detection and biosecurity, both framed as essential to safeguarding national resilience against misuse of generative models.

Institutional reforms have reinforced this dual track. The rebranded Center for AI Standards and Innovation now focuses on supporting developers and downstream firms through voluntary standards and best-practice guidance rather than formal regulation. Further executive orders expected later in 2025 are likely to address compute capacity, energy supply and infrastructure investment for data-centre expansion all viewed, as the [Brookings Institute](#) argues, as strategic enablers of AI competitiveness.

Taken together, U.S. AI policy in 2025 reflects an accelerative, market-driven strategy. Open-weight models, infrastructure investment and selective deregulation now sit at the centre of national policy, alongside enhanced security monitoring of foreign AI activity. The result is a national posture that favours innovation first and regulation later, betting that speed and openness will secure American leadership in the global AI race — even as questions of safety, accountability and governance remain unresolved.



## 6.4 China

“China is going to win the AI race,” says Nvidia CEO Jensen Huang in the [Financial Times](#).

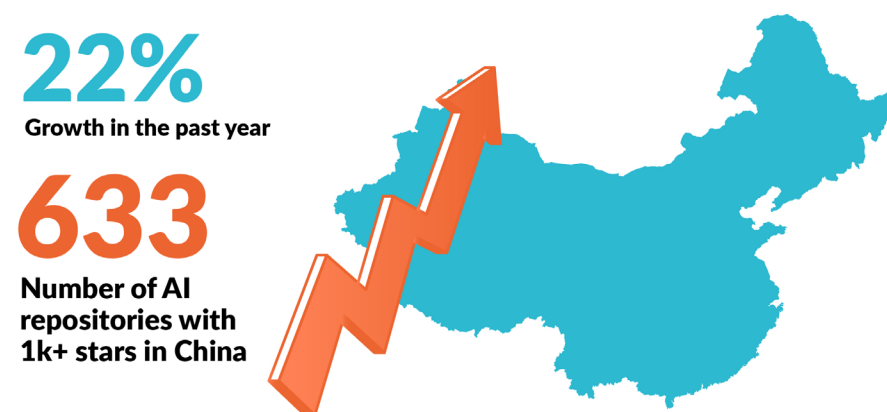
2025 may be seen as China’s year in open source AI. DeepSeek brought its R1 LLM to market in January and rocked the market, with its creation through distillation of existing LLMs, enabling a 95% cost reduction in AI Model creation. Last January, [Fortune](#) discussed the rise of DeepSeek representing a watershed moment in this trajectory. This is because its reasoning model, R1, has been described as “AI’s Sputnik moment” by Marc Andreessen, signalling a geopolitical and technological shift. DeepSeek’s approach has disrupted assumptions about the resource intensity of frontier AI development. The cost efficiency, combined with full open source availability, has positioned DeepSeek as a preferred alternative to proprietary Western models, although there are concerns over cybersecurity and regulatory risks.

According to the [Stanford AI Index](#), China is closing the gap. Since mid-2025, China has led the world in open source LLM development, with models from Alibaba, DeepSeek, and Zhipu AI achieving global adoption. Open source underpins national strategies like Made in China 2025 and AI+, driving domestic competition, cost efficiency, and global influence—positioning China as a key shaper of emerging AI standards.

Rachel Cheung in November in [The Wire China](#) discusses that China has rapidly emerged as a major force in the global open source AI ecosystem, leveraging cost efficiency, technical innovation and strategic openness to challenge Western dominance. A key driver of this trend is the proliferation of Chinese developed LLMs that are affordable and open source, enabling widespread adoption across industries. In addition to the infamous DeepSeek LLMs, Alibaba’s Qwen series has gained traction among global tech firms for its speed and low cost. Baidu’s release of ERNIE-4.5-VL, an open source multimodal model, claimed to outperform OpenAI’s GPT-5 and Google’s Gemini on vision related benchmarks. These are standardised tests that evaluate how well AI models understand and generate information from visual data — such as images, diagrams, or video frames. The model’s efficiency, activating only three billion parameters during operation, reflects a broader trend toward resource optimised architectures. The Wire China article also notes that four of the top five trending models on Hugging Face originate from Chinese labs.

An article from Goldman Sachs in November, [China’s AI Providers Expected to Invest \\$70 Billion in Data Centers](#) shows that China is investing heavily in infrastructure to sustain its AI growth. Goldman Sachs estimates that Chinese AI providers will allocate over \$70 billion to data centre expansion in the coming year, signalling a “build it and they will come” phase aimed at supporting domestic and global AI demand. Nilesh Jasani in a recent Asian Times article [Nothing is given: China’s open-source AI tsunami](#) notes that this surge in open source AI from China is strategic. By lowering barriers to entry and fostering global developer engagement, Chinese firms are reshaping competitive dynamics and eroding the traditional moats of Western incumbents. However, this openness raises questions about governance, security and long-term sustainability, particularly as geopolitical tensions and export controls persist.

China’s policy has not come out of nowhere and in 2020 China saw its Ministry of Industry and Information Technology (MIIT) set a clear open source policy and set up the national Open Atom Foundation. This followed on from its “New Generation Artificial Intelligence Development Plan” in 2017 which set out the rapid development of AI as a strategic priority and states that open source sharing is a foundational principle. This also enables a central role in shaping AI governance through standards and frameworks.



## 6.5 The UK

The UK’s approach to open source and AI in public services reflects a growing recognition of its potential benefits as well as significant implementation challenges. Open source AI is seen as a pathway to greater transparency, cost efficiency and strategic autonomy. Meta has published a brief article, [Keeping the door open: A roadmap for integrating open-source AI in public services](#), which discusses how this enables governments to avoid vendor lock-in and maintain control over critical systems. However, barriers such as technical skills gaps, funding misalignment and coordination deficits have slowed adoption, prompting calls for policy integration, capacity building, and ecosystem investment.

At the same time, debates around openness in AI extend beyond technical considerations and question safety and governance. Rather than framing openness as absolute, it could be argued that instead it should advocate for evidence based decision making and collaborative dialogue. Together, these perspectives highlight the UK’s challenge of leveraging openness to enhance public services while safeguarding against misuse and ensuring public trust. This redefines open source as a governance paradigm for AI, where openness is not only about access to code, but about institutional maturity, trust, and strategic control. It moves the concept from the periphery of IT policy into the core of national AI strategy, asserting that open source is how democratic governments can both innovate and remain accountable in the face of powerful proprietary AI systems.

In September 2025, the Demos report, [Open Horizons: Exploring nuanced technical and policy approaches to openness in AI](#) sought to elevate openness from a software principle to a system design philosophy for AI governance. Where the meta article argues that open source should be a viable policy option, the Demos report argues that openness itself — in all its forms — is the organising principle for a democratic, safe, and competitive AI ecosystem.

A recent RedHat survey, [UK Organizations Ready for Widespread AI Adoption, but Skills Gaps, High Costs and ‘Shadow AI’ Threaten Ambition](#), highlights that AI is a growing concern in UK organisations’ IT strategies, with planned AI investment increases averaging 32% by 2026. AI and security are the joint top IT priorities for 62% of respondents, followed by hybrid cloud and virtualisation. Yet 89% of organisations report limited customer value from current AI initiatives, citing high implementation costs, data privacy issues, and integration challenges. Most see open source as essential to advancing AI and other IT priorities. Agentic AI, operationalisation, and broad employee adoption emerge as top focus areas, though “shadow AI” use is widespread. While 83% believe the UK could become a global AI leader, confidence lags behind European peers due to talent and funding gaps.

Cloud complexity and sovereignty concerns persist, but openness and collaboration—particularly through enterprise open source—are viewed as key enablers of sustainable, value-driven AI adoption.



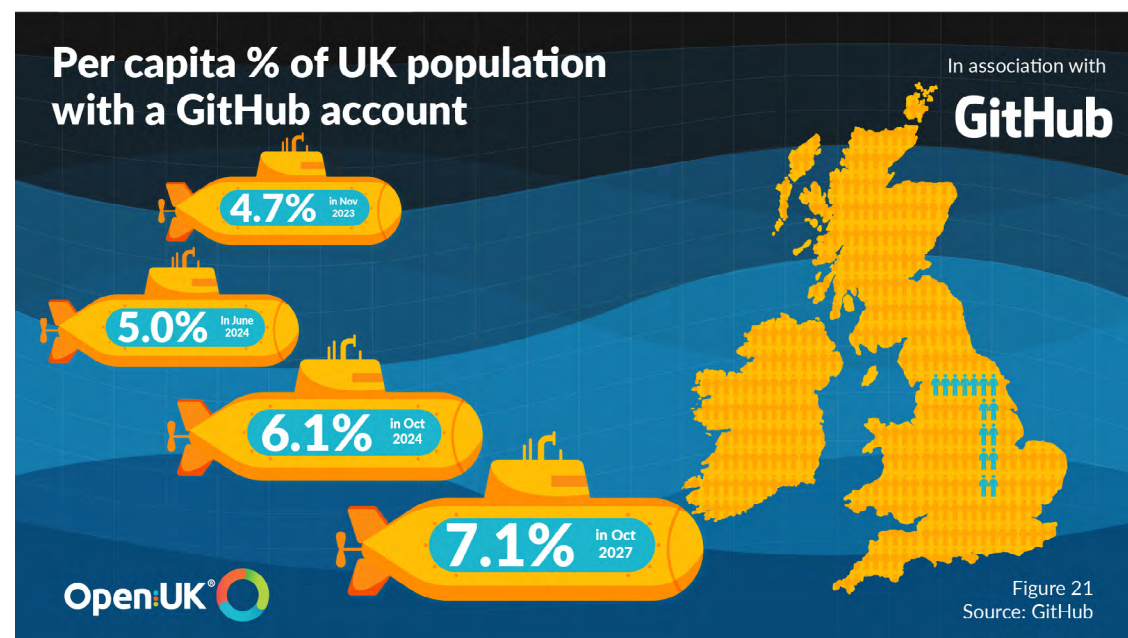
## The Overall Open Source Picture in the UK

### 6.5.1 UK and Open Source

The total number of GitHub accounts, the “traditional” measure of collaboration globally, now stands at 4.8 million in the UK, up from 4.1 million one year ago.

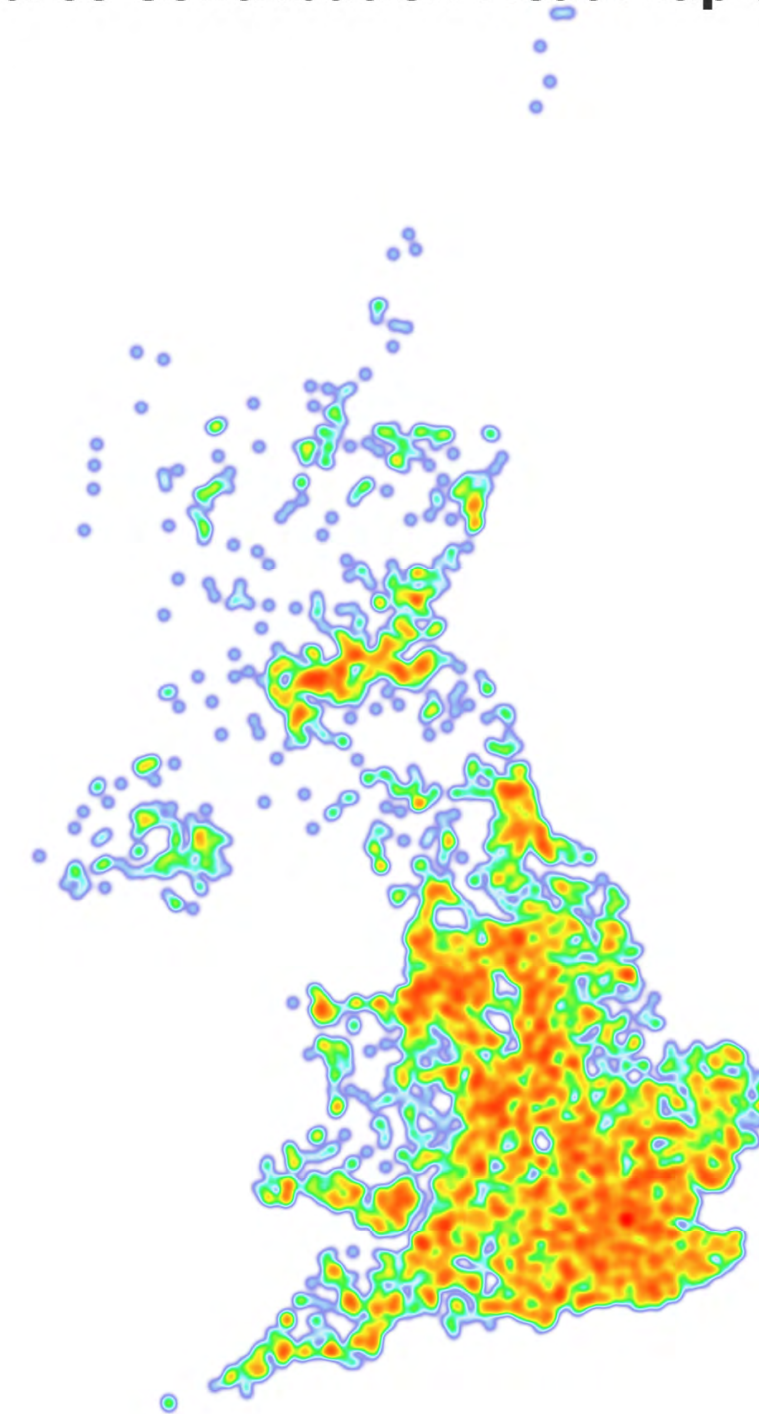


This means that as at October 7.1% of the UK population currently has a GitHub account compared to 6.1% in October 2024. This is the highest per capita percentage of any country in the world.



This heatmap of open source contribution across the UK shows the density of contributors as they are distributed across the country, with hotspots based on volume of contributions.

## Open Source Contribution Heat Map of UK 2025

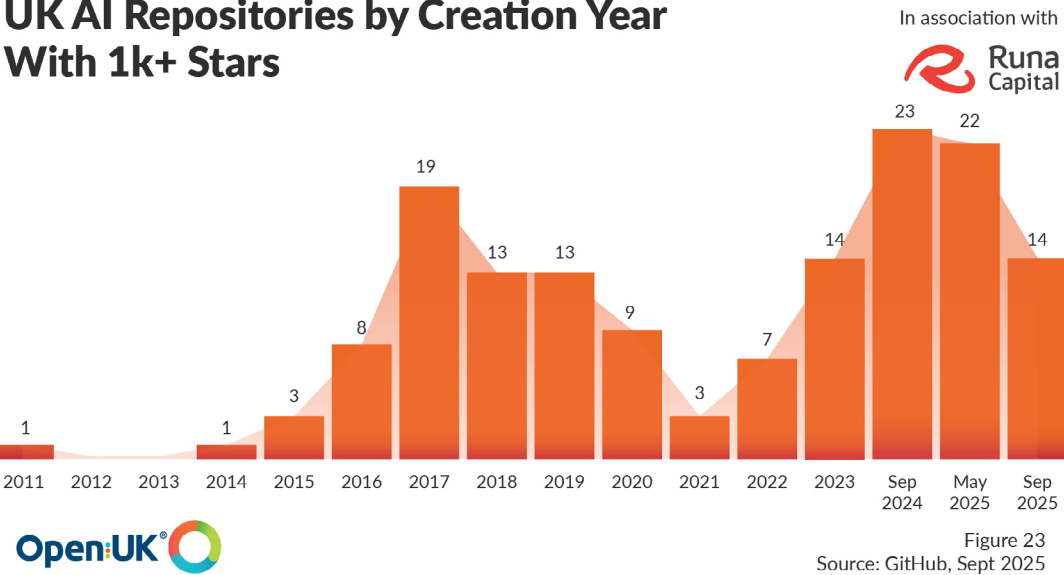


6.5.2 AI Openness in the UK

AI Repositories created in the UK by year created

In the last quarter we see a decrease on May 2025's figure to 22 AI repos with 1k+ stars, reflective perhaps of an increase in the global contributors to UK-based repositories and the UK's international collaboration.

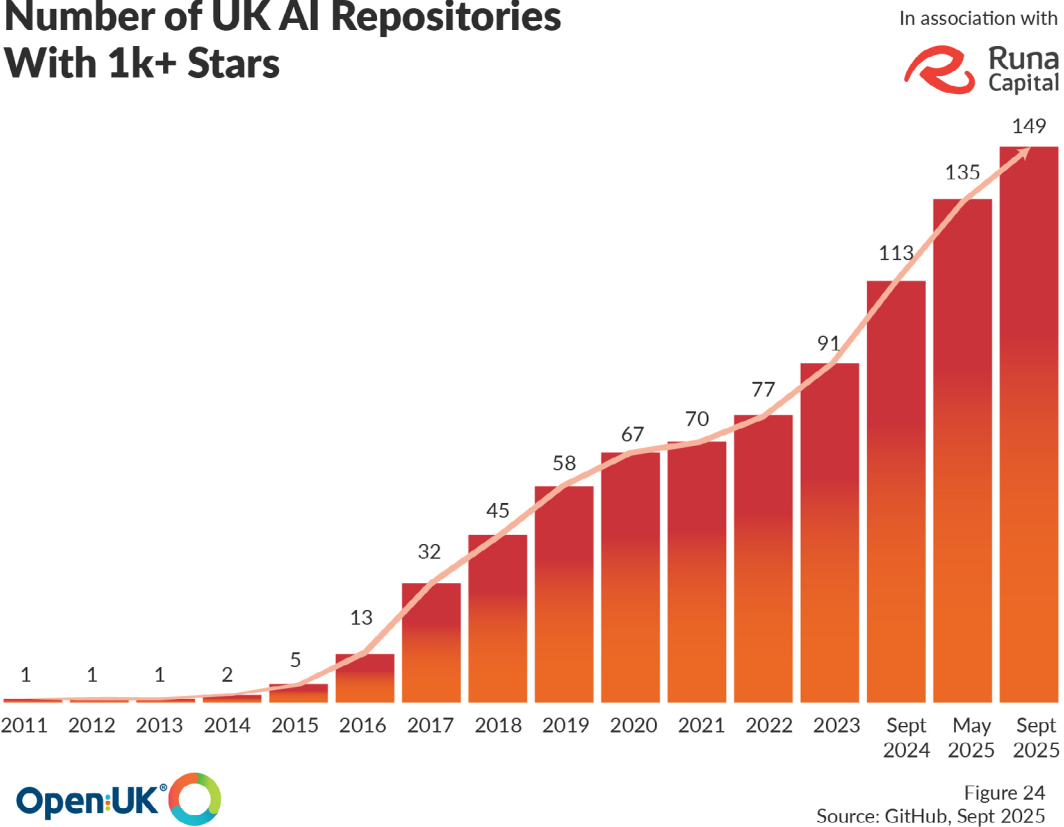
UK AI Repositories by Creation Year With 1k+ Stars



The Number of UK AI Repositories

The total number of AI repositories with 1k+ GitHub stars in the UK increased to 149 as at 30 September 2025, being a 32% increase on the number one year earlier.

Number of UK AI Repositories With 1k+ Stars



Top 10 UK AI Repositories

Significant Gravitas/AutoGPT continues to top the charts on AI repositories with 1k+ stars in the UK.

Top 10 AI Repositories UK

In association with Runa Capital

Rank UK	Repo name	Repo description	Stars
1	Significant-Gravitas/AutoGPT	AutoGPT is the vision of accessible AI for everyone, to use and to build on. Our mission is to provide the tools, so that you can focus on what matters.	179599
2	openai/openai-python	The official Python library for the OpenAI API	29223
3	alyssaxuu/screenity	The free and privacy-friendly screen recorder with no limits 🍷	17554
4	arc53/DocsGPT	Private AI platform for agents, assistants and enterprise search. Built-in Agent Builder, Deep research, Document analysis, Multi-model support, and API connectivity for agents.	17348
5	ivy-llc/ivy	Convert Machine Learning Code Between Frameworks	13287
6	pydantic/pydantic-ai	GenAI Agent Framework, the Pydantic way	14234
7	triggerdotdev/trigger.dev	Trigger.dev – build and deploy fully-managed AI agents and workflows	12753
8	ibvips/libvips	A fast image processing library with low memory needs	10808
9	sashabaranov/go-openai	OpenAI ChatGPT, GPT-5, GPT-Image-1, Whisper API clients for Go	10384
10	google-deepmind/sonnet	TensorFlow-based neural network library	9893

Open:UK<sup>®</sup>

Figure 25  
Source: GitHub, Sept 2025



## 6.6 India

### 6.6.1 India's Open Source Community

**Sai Rahul Poruri**  
CEO,  
FOSS United Foundation



The Free and Open Source Software movement in India has come a long way since its humble origins in the late twentieth century. Budding entrepreneurs are creating FOSS businesses after witnessing the significant value that FOSS provides to the software industry over the past two decades. The Free Software philosophy is seeing a resurgence, too, especially with the current discourse about the extractive nature of LLMs and GenerativeAI. Individuals are participating in FOSS communities and the Digital Commons with revitalised energy after the COVID-19 pandemic. Governments, including the United Nations, are beginning to recognise the economic and strategic value of FOSS, especially from the lens of Digital Sovereignty. While systematic issues, like long-term sustainability of FOSS, are still a persistent thorn in our back, it is a good time to create, contribute to, and engage with FOSS.

FOSS is heavily used in the Indian software industry. A recent report by the National Law School of India University, Bengaluru, highlighted FOSS usage across the Government, Finance, Education, Software as a Service, and Healthcare sectors, in startups and in large established organisations. In the financial sector, organisations like Razorpay and Zerodha stand out because they not only use FOSS heavily within their respective organisations, but they also create FOSS projects. Razorpay, in particular, highlighted the credibility that an organisation can gain if a FOSS product they create becomes the standard. One of the largest private sector banks in India was also surveyed as part of the study and they highlighted the importance of owning their platforms in order to differentiate themselves, respond to changes faster, maintain an edge in the market and also compete with fintech organisations. Open Source Program Offices (OSPOs) are being established in organisations, large and small, to drive FOSS adoption, ensure license compliance, and establish the necessary internal incentive structures. Organisations like Frappe, with their ERP, CRM, HR and other FOSS software solutions, are chipping away at the moat that closed-source software solutions had built around critical business software.

A few organisations in the Civil Society have long relied on FOSS to ensure that their funds are being utilised in the best way possible, and these lessons are slowly spreading across the sector. Organisations like Tech4Good Community are helping non-profit organisations adopt FOSS solutions, in some cases going as far as creating new FOSS projects if none exist for the particular problems that they discover. Established FOSS Projects like Bahmni from Thoughtworks and StoryWeaver from Pratham Books were recognised as Digital Public Goods for their contributions to improving health and education outcomes respectively. New FOSS projects, like Open Healthcare Network, continue to drive innovation. Funding and grant-giving organisations aren't falling behind either, with organisations like Dasra and Rohini Nilekani Philanthropies working with grantees like Project Tech4Dev and Tech4Good Community respectively to enable FOSS awareness across grantees. Last, but not least, events like the T4GC Summit and OASIS Summit bring people together to discuss FOSS adoption challenges, opportunities, strategies, and more.

Academia and the Education sector aren't falling behind either. Startups like Kalvium are reimagining higher education pedagogy around FOSS projects and practices, and researchers are creating FOSS projects to solve their research challenges. Globally, projects like NumPy and SciPy were created to address the needs of scientific computing researchers, which then went on to become the foundation of the AI revolution. In India, projects like the CoRE-Stack, short for Commoning Technologies for Resilience and Equality, are reimagining how tools can be built to empower communities and show how technology can be built with the people at the center.

With the prevalence of remote work after COVID-19, we have seen an increase in the number of FOSS maintainers and contributors in India that are financially supported full-time or part-time. This led to a dramatic increase in community engagement, especially over the past few years. Students are also turning to FOSS projects and communities for real-world technical learning and mentorship that is lacking in the traditional

higher education system. This is both a boon and a bane, as long standing communities are dying a slow death because they don't have the financial backing that some of the newer communities do. Additionally, veterans who have lived through tech bubbles are wary of the negative impact when the money dries up.

Most importantly, the Government of India has unfortunately been slow on FOSS uptake, both at the Union Government-level and at State Government-levels. The Government of Kerala is an outlier, with Kerala Infrastructure and Technology for Education (KITE) and ICFOSS as beacons of what is possible when a Government systematically invests and supports FOSS adoption. The slow uptake isn't because of a lack of awareness. The National Payments Corporation of India (NPCI) publicly acknowledges the significance of FOSS in its infrastructure. The Government of India was a pioneer in drafting and adopting policies that promote the adoption of FOSS by the Union Government. Still, unfortunately, we haven't been able to enforce the policies. The Indian FOSS community has also failed to keep the Union Government accountable in this regard. Finally, apart from the Government of Kerala, there aren't many notable instances of State Governments adopting FOSS systematically. All is not lost, though, as policy capacity within the FOSS community is on the rise.

While the FOSS communities face numerous new challenges, there is no doubt that we live in interesting times. Interest in Free and Open Source Software is at an all-time high, and communities around the country have more resources and capacity than ever before. It is an exciting challenge to build on the current situation and enable long-term sustainability of the numerous FOSS communities around the country.



"An open and accessible AI cloud platform is essential for strengthening India's AI ecosystem.

When compute, data, and tools are democratised, innovators across academia, startups, and enterprises can collaborate more effectively to solve real-world challenges in healthcare, education, BFSI and more.

Openness in AI is more than a principle; it is the foundation of equitable access to technology that drives discovery, empowers innovators, and ensures India's AI growth remains inclusive, responsible, and globally influential."



**Narendra Sen**  
Founder and CEO  
NeevCloud & RackBank Datacenters

## 6.6.2 Thought Leadership: Advancing Open Source AI in India

### Recommendations for Governments and Technology Developers

**Urvashi Aneja**  
**Founder and Director,**  
**Digital Futures Lab**



India stands at a critical juncture in shaping how AI is developed, governed, and applied. As AI systems begin to influence a wide range of public and private services, from healthcare to education and welfare delivery, questions of transparency, affordability, inclusion, and accountability are gaining prominence. Who builds and funds these systems? On what terms are they shared or adapted? What forms of access and oversight are made possible - or foreclosed - by the way AI is designed and released?

Against the backdrop of these critical questions, NASSCOM has partnered with Digital Futures Lab, FAIR Forward – “Artificial Intelligence for All” and the Development (BMZ) to explore open source in AI as a strategic policy option within India’s evolving AI ecosystem. The policy brief unpacks the critical importance of openness for India’s digital future, crystallising the key opportunities it offers to governments and developers alike. It also recognises the barriers and risks that accompany an open source approach, particularly within India’s institutional and regulatory realities, and the trade-offs different stakeholders may encounter. Building on this analysis, it presents concrete, actionable recommendations, outlining key policy levers for governments as well as practical steps for AI practitioners navigating complex questions around implementing open source AI.

#### Openness in AI as a Gradient

The term “open source AI” is often used inconsistently, encompassing a wide range of release practices that differ not only in degree, but if possibly not in intent and substance. This is because openness in AI is not a binary attribute but a spectrum. Components of an AI system (data to model weights to documentation) can be made open to varying degrees and under different conditions. What openness ultimately enables depends on which component of the AI system is open. For instance, open data may enable greater scrutiny and contextual adaptation, while open weights may facilitate replication and benchmarking when included with other open components. These opportunities manifest across different layers of the AI ecosystem, offering distinct advantages to different stakeholders.

#### Openness Enables Inclusive Innovation and Strategic Autonomy

Open source AI holds significant potential to reshape who builds, adapts, and benefits from AI systems in India. By reducing the costs of access and experimentation, openness expands the range of actors who can meaningfully participate in AI development - small startups, academic institutions, state agencies, civic-tech groups, and independent researchers. This is particularly salient in the Indian context, where the needs of diverse linguistic communities, sector-specific use cases, and resource-constrained settings may not be catered well by mainstream, proprietary AI models. Beyond widening participation, open approaches can also serve as a lever of strategic autonomy and digital sovereignty, reducing dependence on foreign vendors.

#### Openness as a Pathway to Responsible AI

Transparency is essential not just for technical scrutiny, but for making AI systems more responsible, ethical, and aligned with public interest. As AI tools increasingly mediate decisions in health, education, financial services, and beyond, the need to understand how these systems operate, evaluate their impacts, and trace their decision logic becomes critical.

Open source AI helps create these conditions. When key components such as model code, datasets, evaluation protocols, and documentation are made accessible, they enable external actors, including researchers, developers, civil society, and regulators, to audit systems, replicate findings, and identify issues like bias, discrimination, or misalignment with stated objectives.

#### Navigating the Risks of Open source AI

While openness offers significant public benefits, it also introduces risks. Open release can enable misuse,

including the generation of disinformation as well as biased or unsafe deployments. These risks are particularly pronounced in settings where institutions lack the legal, technical, or organisational capacity to monitor or mitigate such harms. Many of these risks are not unique to open source systems. Closed and proprietary models also raise serious concerns around bias and malicious use. However, the risk profile of open source AI is shaped by its decentralised governance. This structure can be both a strength and a limitation. Decentralisation may support transparency and wider oversight, but it can also leave gaps when misuse or security threats escalate more rapidly than existing safeguards can respond.

### Key Recommendations: Policy and Developer Pathways

#### For Policymakers - State as a Promoter of Open source AI

- Support open source AI projects through existing compute allocation schemes; prioritise access for projects committing to open source AI components.
- Create long-term sustainability mechanisms (grants/blended finance) for maintaining high-value open datasets, models, and tools.
- Extend MSME-style designations to small open-source AI firms to improve procurement participation and access to finance.
- Build awareness across government and ecosystem actors through information campaigns, short courses, and public repositories.

#### State as a Regulator and Standard Setter

- Establish minimum thresholds of openness in publicly funded AI — such as release of source code, weights, evaluation datasets, and adequate documentation.
- Convene a community-led effort to clarify how licensing applies to AI (RAIL, Creative Commons, Apache) and develop India-specific templates if needed.
- Complement licensing with safeguards such as oversight mechanisms, watermarking, and bug-bounty programmes.
- Extend MeitY’s existing Quality and Certification frameworks (STQC) to include AI systems, by introducing evaluation benchmarks for aspects like robustness, reproducibility, cybersecurity, and documentation. These benchmarks would be especially valuable for open source AI projects, helping improve their credibility, production-readiness, and eligibility for government adoption.

#### State as a Procurer and User

- Embed openness as a consideration in procurement, reward openness in procurement scoring where desirable.
- Relax prior deployment requirements so open source teams can demonstrate fitness via pilots or audits rather than past large deployments.
- Build procurement capacity through training of government officials.
- Establish transparency baselines for public sector AI (registries, disclosure of evaluations, and risk assessments).
- Model best practices when the state is itself a developer: release models/datasets under responsible licenses, ensure documentation and traceability, and ensure platforms like AI Kosh meet minimum quality and documentation standards.

#### For AI Practitioners

- Prioritise meaningful openness: Focus on releasing components that enable genuine reuse and scrutiny such as model weights, training code, evaluation datasets, and documentation rather than symbolic or partial artefacts.
- Strengthen documentation and traceability: Publish model cards, data cards, metadata, paradata, and lineage information to ensure transparency around development choices, dataset provenance, and performance characteristics.
- Choose licensing fit for purpose: Select licenses that suit your intended use, degree of openness, and risk profile.
- Incorporate safeguards for responsible use: Use technical and legal safeguards such as watermarking, access controls, use-based licensing clauses, and public statements of permitted use, to reduce the risk of misuse or harm, particularly for sensitive or high-risk deployments.
- Plan for long-term stewardship: Build clear mechanisms for ongoing maintenance, community contribution, bug reporting, and external audit, to ensure open source artefacts remain usable, safe, and relevant over time.



### 6.6.3 Open source in India

Building on these global trends, India stands out as a compelling case study of how open source platforms and AI can be strategically harnessed for national development, public sector innovation, and inclusive digital empowerment.

#### Policy and Strategy

India's AI strategy is built upon open innovation, public-sector-led development and global leadership for sustainable development. [The Rise of FOSS in India: Empirical Evidence and Insights from Cross-Sectoral Case Studies](#) discusses how the FOSS policy introduced in 2015 mandates open source software adoption in e-governance, with states such as Kerala, Andhra Pradesh and Tamil Nadu implementing local mandates. Kerala's KITE program trains 1,800,000 students annually in AI and FOSS, saving ₹3,000 crore annually through open source adoption.

#### Public platforms and digital goods

Initiatives such as Bhashini (language translation), iGOT Karmayogi (government training), and eSanjeevani (telemedicine) demonstrate scalable deployment of open source platforms in public service delivery. HCX and CARE, recognised as Digital Public Goods, show how FOSS (Free and Open Source Software) enables rapid development and cost savings in health infrastructure. However, sustainability and community support remain ongoing challenges, as highlighted by the Atlantic Council in [India's path to AI autonomy](#).

#### Enterprise and Grassroots Adoption

As discussed in [Is AI reshaping India's business landscape?](#) by Mint, India ranks highest globally in regular use of open source AI models (77%), with widespread adoption of Llama, Gemma, and Minstrel. Startups benefit from cost savings, customisation, and data control. Grassroots efforts like VGLUG in Tamil Nadu illustrate how open source AI tools can support empowerment and poverty reduction. In addition to this, access to reproducible open source models, as discussed by Banerjee et al in [Aalap: AI Assistant for Legal & Paralegal Functions in India](#), helps India's grassroots innovation by lowering barriers to experimentation and enabling transparent model development.

#### Enterprise and Developer Ecosystem Growth

[GitHub's Octoverse 2025 Report](#) highlights India's role in the global developer ecosystem. In 2025, India added over 5 million new developers, this accounts for 14% of all new GitHub accounts and is projected to represent one in three new developers by 2030. This surge reflects grassroots enthusiasm and the institutional support for open source and AI.

The widespread use of GitHub Copilot and LLM SDKs among Indian developers suggests rapid onboarding and experimentation with AI tooling. These trends reinforce India's strategic positioning as a consumer and contributor to open source AI models and tools, complementing its policy-led initiatives and public platform deployments.

#### Global Leadership

India currently holds the Chair of the GPAI Council and its role as host of the next AI Action Summit positions it as a leader in inclusive, open AI governance. [Prime Minister Modi's 2025 Paris speech](#) called for open source systems to build trust and transparency, a message which has been echoed by BRICS and UN institutions.

India offers a compelling model of AI autonomy: mission-led, inclusive, and open source driven. By blending national platforms with grassroots innovation and global engagement, India has a solid trajectory and blueprint for development-oriented AI.

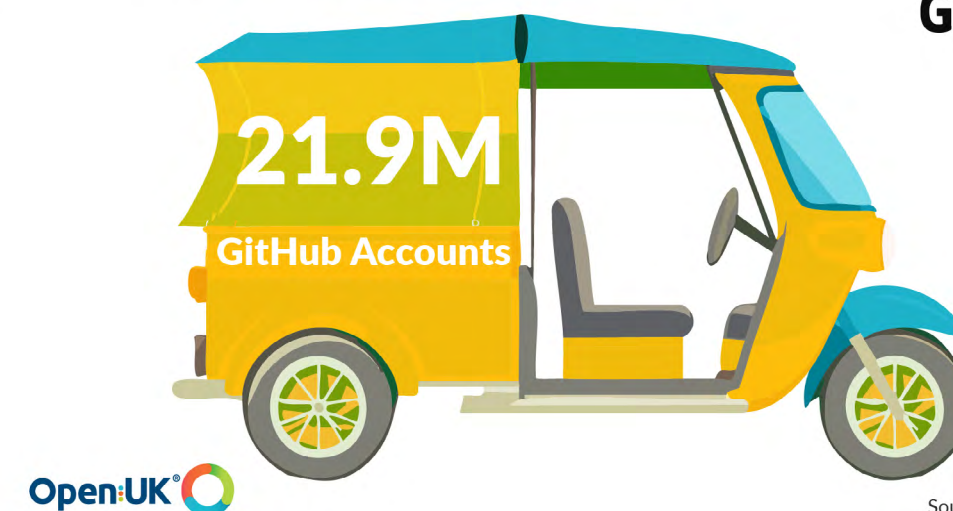
### India GitHub Accounts

India currently has 21.9 million GitHub accounts up from 18 million in December 2024.

#### India GitHub Accounts October 2025

In association with

**GitHub**

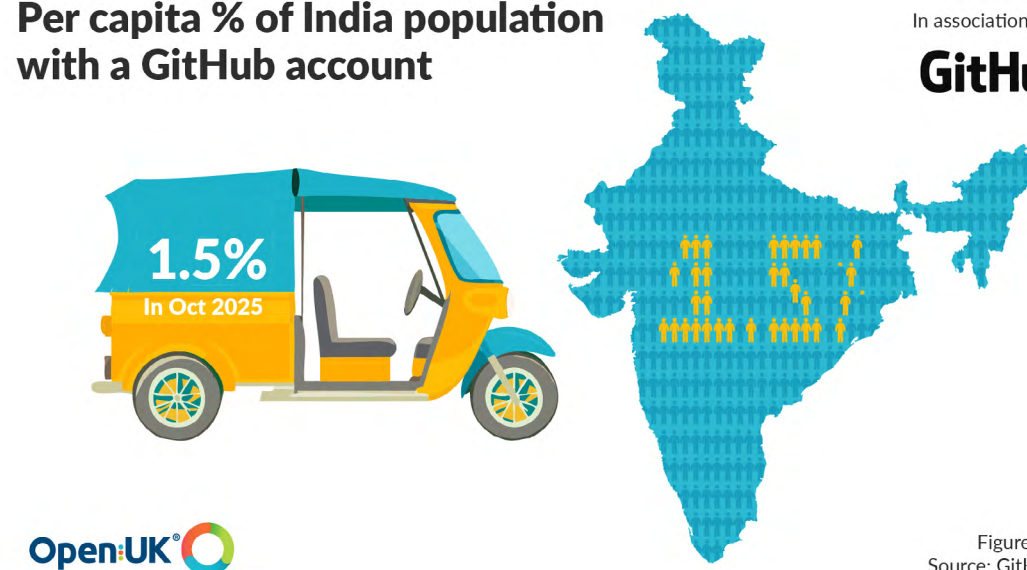


This means that 1.5% of India's vast 1.46 billion person population has a GitHub account.

#### Per capita % of India population with a GitHub account

In association with

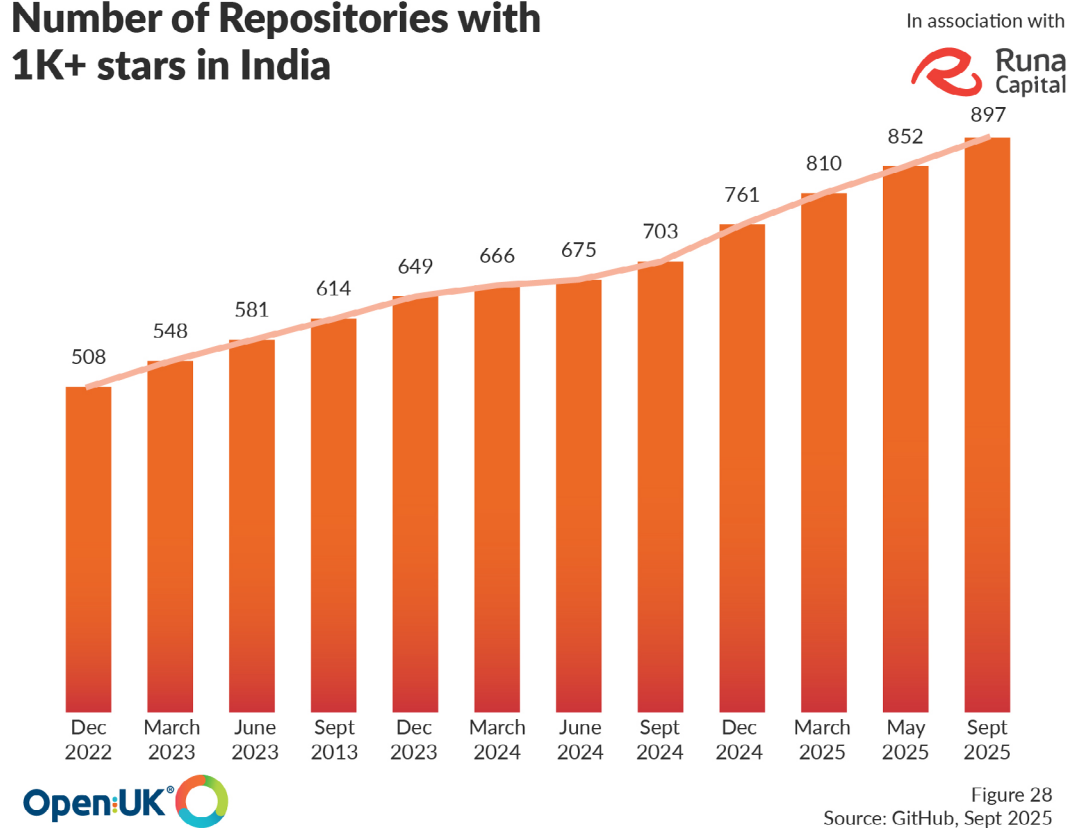
**GitHub**



### Open Source Repositories with 1K+ stars in India

India currently has 897 repositories with 1k+ stars, up from 703 one year ago. If we zoom out to India-based contributors with 1+ commits to any repository we find 45,000.

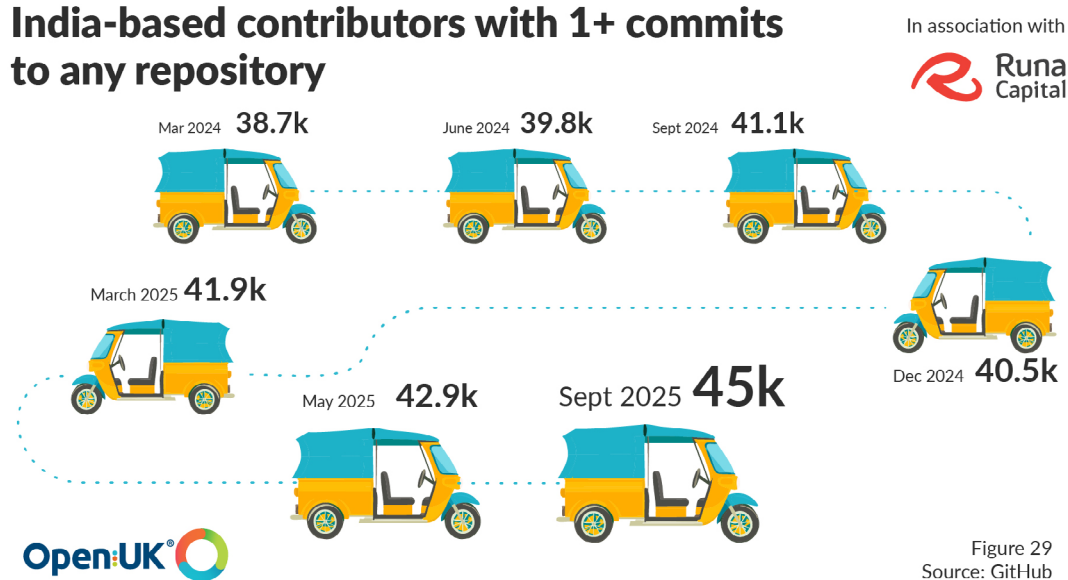
#### Number of Repositories with 1K+ stars in India



### India-based contributors with 1+ commits to any repository

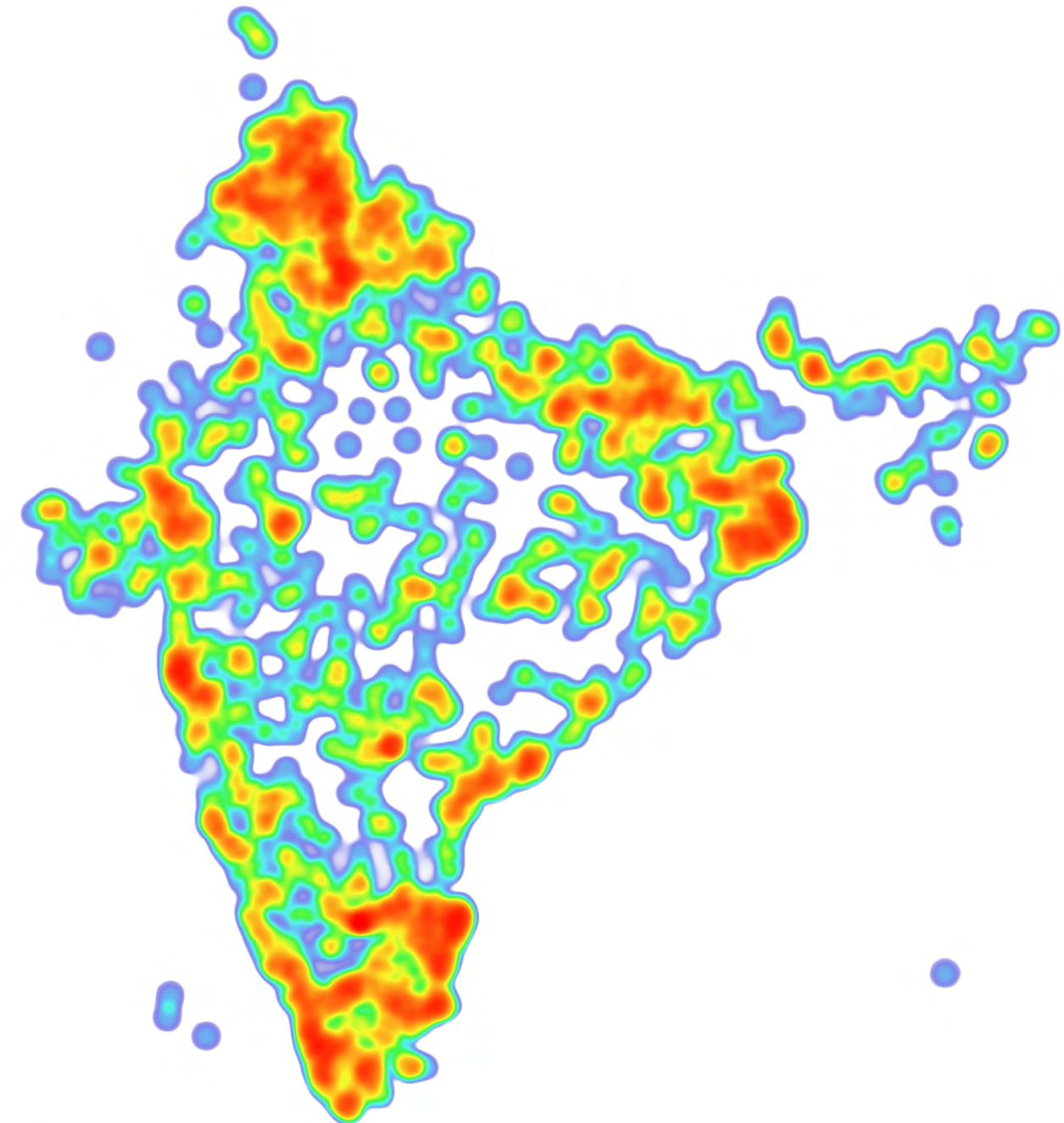
There are now 45,000 contributors with 1+ commits to any repository in India, up from 41,100 one year ago in September 2024.

#### India-based contributors with 1+ commits to any repository



### Heatmap of Open Source Contributions in India

## Open Source Contribution Heat Map of India 2025





## Developers in India

India is the fastest growing economy for developers with an additional 5 million in 2025. This means that developers in India grew by more than the UK cumulative number of developers in one year and is on track to account for one in every three new developers on GitHub by 2030.

### Number of New Developers Over Time in India

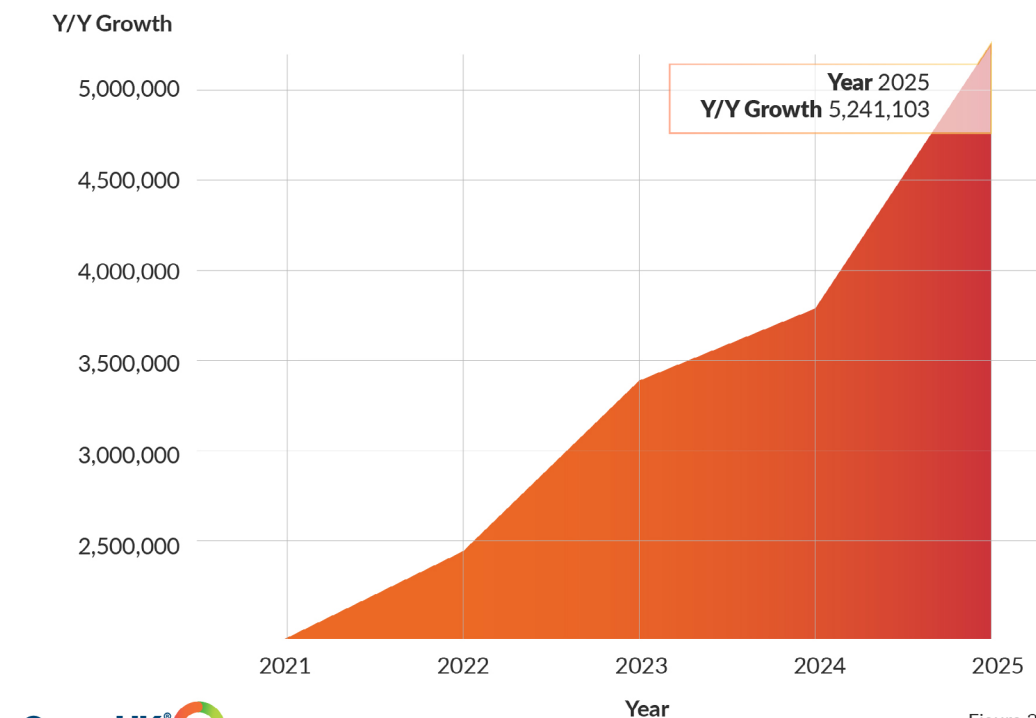


Figure 31  
Source: GitHub, Oct 2025

## 6.6.4 AI Repositories in India

Focusing now on AI repositories, India currently has 4,441 contributors with 1+ commits, up from 3,424 one year ago.

### India-based contributors with 1+ commits to AI repositories

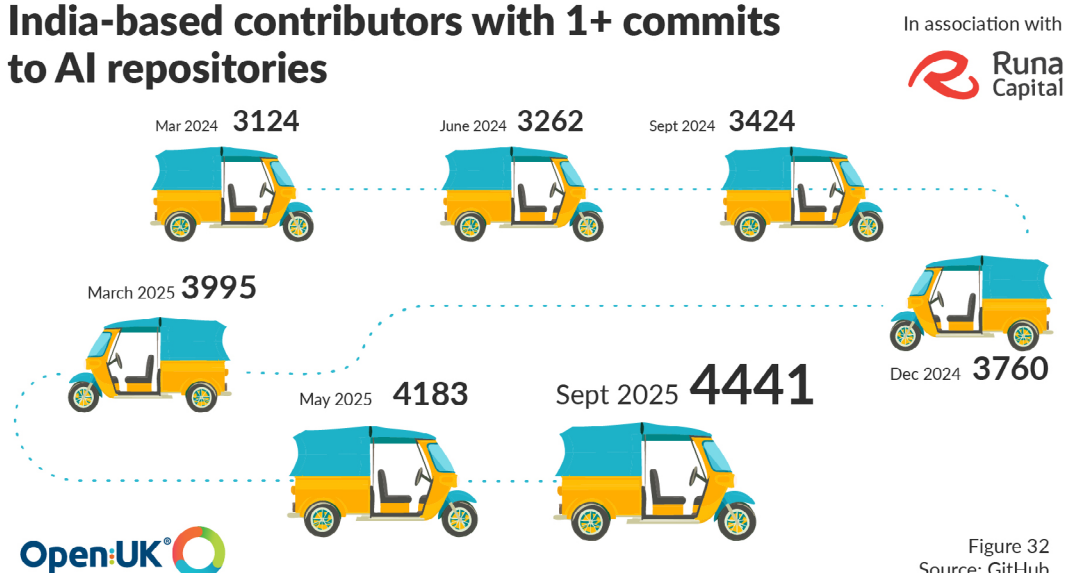


Figure 32  
Source: GitHub

The number of AI repositories with 1k+ stars in India grew from 40 to 60 over the past year, showing incredible 50% growth.

### Number of AI Repositories with 1K+ stars in India

In association with  
Runa Capital

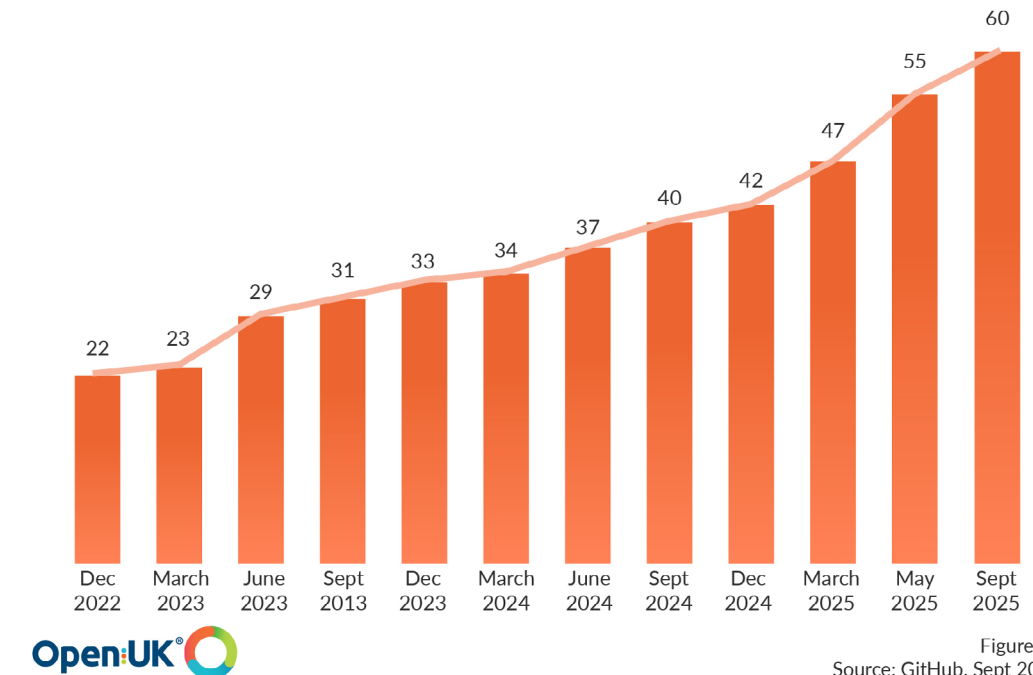
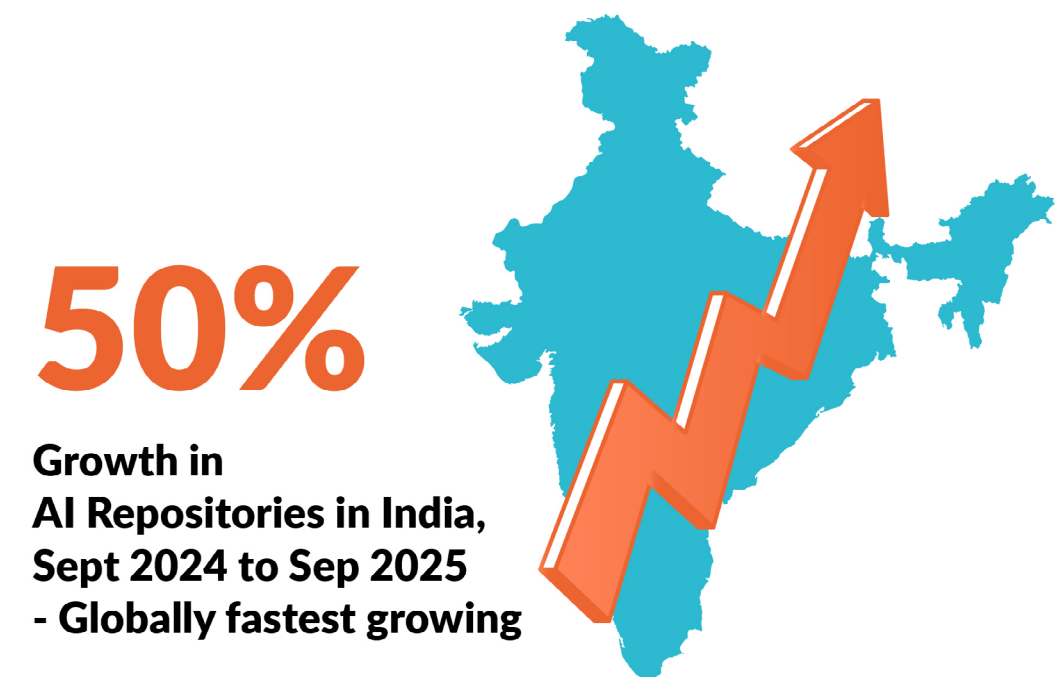


Figure 33  
Source: GitHub, Sept 2025

## India Showing Incredible Growth in AI Repositories



In association with  
Runa Capital

Figure 34  
Source: GitHub, Sept 2025

Top 10 AI Repositories in India

Using the same method as above, we find these are the top 10 AI repositories in India.

Top 10 AI Repositories in India In association with Runa Capital

Rank	Repo name	Repo description	Stars
1	mufeedvh/code2prompt	A CLI tool to convert your codebase into a single LLM prompt with source tree, prompt templating, and token counting.	6739
2	adithya-s-k/omniparse	Ingest, parse, and optimize any data format from documents to multimedia for enhanced compatibility with GenAI frameworks	6730
3	antinomyhq/forge	AI enabled pair programmer for Claude, GPT, O Series, Grok, Deepseek, Gemini and 300+ models	4554
4	sksq96/pytorch-summary	Model summary in PyTorch similar to `model.summary()` in Keras	4064
5	abhiTronix/vidgear	A High-performance cross-platform Video Processing Python framework powerpacked with unique trailblazing features :fire:	3635
6	CursorTouch/Windows-MCP	MCP Server for Computer Use in Windows	3396
7	ayooshkathuria/pytorch-yolo-v3	A PyTorch implementation of the YOLO v3 object detection algorithm	3316
8	shankarpandala/lazypredict	Lazy Predict help build a lot of basic models without much code and helps understand which models works better without any parameter tuning	3252
9	SamurAIGPT/EmbedAI	An app to interact privately with your documents using the power of GPT, 100% privately, no data leaks	2796
10	ashishpatel26/LLM-Finetuning	LLM Finetuning with peft	2695

6.7 Overall trends in open source and AI

Data from 2025 shows a rapidly expanding, decentralised AI ecosystem where open source development, AI-assisted coding, and global collaboration are redefining the pace and geography of innovation. The U.S. continues to lead in overall repository volume, but India and China now drive the fastest growth, reshaping participation and influence in open AI.

GitHub recorded 36 million new accounts in 2025, pushing the total developer base beyond 180 million. The release of Copilot Free removed cost barriers, making AI-assisted coding the norm: 80% of new users activated Copilot within a week. This marked a shift not just in participation but in how development happens, with AI now embedded into everyday coding workflows.

Globally, the number of open source AI repositories with 1k+ stars increased across all major regions. India posted the strongest annual growth (50%), while the UK rose 32%, outperforming the EU’s 22% gain. These figures indicate both momentum in emerging markets and maturity in advanced ecosystems.

The shift to smaller, multimodal, and energy-efficient models defines another major trend. Most new open source AI releases are now resource-optimised architectures suitable for local and edge deployment.

The UK ranks fourth globally for open source AI repositories and third for AI openness, behind the U.S. and India. With 4.8 million GitHub accounts—7.1 % of the population—the UK maintains one of the world’s most concentrated developer bases. Its flagship open source project, AutoGPT, remains the second-most-starred AI repository globally.

India has become the largest open source contributor base worldwide, adding over five million developers in 2025. With 21.9 million GitHub accounts and 897 repositories with 1k+ stars, India now represents a vibrant, fast-scaling hub for AI experimentation. Its growth reflects strong grassroots engagement, government-backed digital initiatives, and widespread use of open source AI models such as Llama and Mistral across enterprise and civic sectors.

Overall, 2025 marks the convergence of openness, sovereignty, and innovation. The U.S. retains scale, China drives efficiency, and India expands participation—but the UK distinguishes itself through governance, quality, and interoperability, solidifying its role as a central, trusted hub in the global architecture of open AI.



## 7. Conclusion

**Dr Jennifer Barth,**  
Research Director OpenUK



The data and analysis presented across this report illustrate a profound global transition. AI is now a shared, distributed, and increasingly open ecosystem. The trends of 2025 reveal not simply a story of growth, but the start of realignment: of power, participation, and purpose across nations, institutions, and technologies. And more than that, the tools available and the way that we are all using them, are part of the changing way we will experience AI openness itself. We can see from the data in this report, the case studies and the thought leadership that we are all part of building something that will look different in the future from anything we've seen in the past.

2025 has been a year of extraordinary expansion. GitHub's developer community surpassed 180 million, with 36 million new users joining in a single year. Yet the real shift lies not in scale but in how these developers now work. The introduction of Copilot Free in late 2024 removed both cost and skill barriers, placing AI-powered assistance in the hands of millions. Within a week of sign-up, 80% of new developers used Copilot, redefining coding as a collaborative, human-AI process.

This change has altered the texture of global software creation. Open source development, long powered by human networks, now moves through hybrid workflows where AI supports iteration, debugging, and documentation. This marks the beginning of what industry leaders call the agentic era, in which code, infrastructure, and intelligence converge through autonomous systems that can reason, coordinate, and improve themselves. It also ushers in a changing relationship between humans as they are augmented by machines the social life of the open source ecosystem looks set to change.

Programming language data further reflects this structural transformation. For the first time, TypeScript overtook Python and JavaScript as the most used language on GitHub. This is not a stylistic preference but a reflection of agentic design: developers now favour typed, structured languages that make AI-generated code safer and easier to integrate into production systems.

The geography of AI innovation is decentralising. The United States remains the largest single contributor to open source AI, hosting over 1,100 repositories with 1k+ stars, but it no longer dominates the growth curve. India and China have emerged as the twin accelerators of open AI, while the United Kingdom and France sustain steady, innovation-led expansion.

India, in particular, has become the world's largest open source contributor base, adding more than five million new developers in 2025 alone. With 21.9 million GitHub accounts—representing 1.5% of its population—India's developer ecosystem combines grassroots participation, institutional support, and national strategy. Its 50% year-on-year growth in AI repositories underscores how open models and accessible tooling are unlocking innovation far beyond the traditional centres. The desire to extend and democratise accessibility leads India's progress with the Indian government supporting and resourcing its citizens with training and the skills required to meet the vision. But the road is long and the gap is wide. More work needs to be done.

China's trajectory is equally significant. The rise of DeepSeek's R1 model, described by Fortune as "AI's Sputnik moment," demonstrated that frontier reasoning systems can be developed openly and cost-efficiently. Chinese labs — from Alibaba's Qwen series to Baidu's ERNIE-4.5-VL — have set new benchmarks in multi-modal performance, challenging assumptions about compute dependency and proprietary advantage.

Europe presents a more complex picture. The EU AI Act, staggered in implementation through 2026–27, has reinforced the region's commitment to accountable AI but it now appears that the Act may not be enforced. Yet data suggests that while regulatory frameworks mature, innovation remains constrained by uncertainty.

The EU's growth in AI repositories lags behind India's and the UK's figures, illustrating the tension between safety-first governance and market agility.

In this context, the United Kingdom stands out. The UK ranks third globally for AI openness and fourth for open source AI repositories, with 149 repositories exceeding 1k stars, up 32% year-on-year. Its hybrid ecosystem — blending academic research, enterprise adoption, and civic collaboration — exemplifies how openness can coexist with regulatory responsibility. The continuing success of AutoGPT, Scotland's globally renowned repository, shows that the UK's strength lies in quality, interoperability, and sustained community engagement rather than volume alone.

As open AI becomes pervasive, the challenge has shifted from access to assurance. The report highlights growing recognition that reproducibility is essential to credibility. Reproducible pipelines — the ability to retrace each step of data preparation, training, and deployment — underpin transparency, accountability, and scientific trust.

Governance innovation is emerging in tandem. Efforts such as the UK's TAIBOM initiative, India's Aalap AI project, and Europe's open evaluation frameworks are embedding documentation, safety, and audit mechanisms into the open source lifecycle. The emphasis is increasingly on practical transparency — ensuring that models can be inspected and tested, not merely declared "open."

Still, global divides persist. The United States' "green-light" approach — privileging speed and competitiveness over regulation — contrasts with the EU's rule-based strategy. India's mission-driven model sits between these extremes: combining openness and inclusion with a clear focus on national capability. Together, these approaches illustrate that AI openness is contextual, expressed differently according to institutional capacity and political intent.

In applied domains such as healthcare, finance, and education, the trend toward open source AI is reshaping expectations of transparency and cost-efficiency. Case studies included Bahmni - an open source hospital management and electronic medical record system by Thoughtworks and Open Healthcare Network, both with strong roots in India. This alongside the thought leadership in the report show the strength of an open source ecosystem that allows for speed, flexibility, efficiencies, trust and most importantly collaboration in often less 'connected' areas of the world.

In healthcare, open models are beginning to close the gap between research and application. Projects like Open Healthcare Network in India and OpenEHR in the UK demonstrate that openness enhances trust and accelerates validation — core prerequisites for ethical AI adoption in sensitive sectors.

If 2024 was the year of "AI in action," then 2025 is the year of AI in architecture — where openness is no longer just a philosophy but the structural foundation of innovation. The data tells a clear story: open source AI is not only scaling faster than proprietary systems but also delivering broader participation, adaptability, and resilience.

As the world looks to the 2026 Global AI Impact Summit in Delhi, one message resonates through the data and discourse alike: the future of AI will not be determined by any single nation, model, or company, but by the openness of the ecosystem itself. Openness lies not only innovation, but legitimacy — the ability for societies everywhere to understand, adapt, and trust the intelligence they create.

Perhaps this will take the shape of "Open Chakra AI"

## 8. Formalities

### 8.1 Contributors

**Abhishek Singh**, Additional secretary, Ministry of Electronics and Information Technology (MeitY), Government of India

Shri Abhishek Singh is a career civil servant with 30 years of experience of governance & policy formulation. He specialises in the use of Technology for improving Governance. He is presently posted as Director General, National Informatics Centre & Additional Secretary, Ministry of Electronics and Information Technology, Government of India, with responsibilities of Artificial Intelligence & Emerging Technologies, Human Centred Computing (HCC) and Digital India Bhashini Division.

He has previously served as CEO, Karmayogi Bharat in Department of Personnel & Training; and CEO NeGD, DIC and MyGov in Ministry of Electronics & Information Technology, Government of India. He has done Masters in Public Administration from Harvard Kennedy School of Government. He is also an alumnus of IIT Kanpur.

**Amanda Brock**, CEO, OpenUK and OpenHQ

OpenUK CEO and Executive Producer State of Open Con, Amanda's 25 years' legal experience includes being instrumental in shaping open source's legal frameworks and internet law in 2000's. Sought-after international keynote speaker, tech press contributor and editor of "Open Source: Law, Policy and Practice" (2022) translated into Mandarin 2025.

**Recognition:** Raconteur 50 CEOs 2025; Computer Weekly 50 Most Influential Women (2023 - 2025) #21 in 2025; Computing IT Leaders 100 (2023-2025); Lifetime Achievement WIPL (2022); Women Who Will (2023); INvolve Heroes (2022, 2023); Novi Awards (2024); Raconteur 50 CEOs (2025), SME4Labour Women In Business Award (2025).

**Advisory:** Boards: UKRI Digital Research Infrastructure; KDE; Mimoto; Scarf; FerretDB and Space Aye; Fellow, Open Forum Academy; Distinguished Fellow, Rust Foundation; European Representative, OIN; Ambassador, Open Charge Alliance, Board Member Mojaloop Foundation and ITU Expert Network, Digital Innovation Board.

**Bharath Reddy**, Associate Fellow, Takshashila Institution

Bharath is an Associate Fellow with the Takshashila Institution. His research lies at the intersection of technology, geopolitics, and India's national interests, with a specific focus on AI governance, open source technologies, and telecommunications. He contributes to research papers and opinion pieces in leading publications in these areas. He also manages Takshashila's Technology and Policy courses. He has previously worked with two leading Indian telecom firms, developing software for 4G base stations.

**Brian Bishop**, Founder & CEO, Data People Connected

Brian Bishop is the founder and CEO of Data People Connected Limited a niche Consultancy and Technology service provider based in Liverpool, England. Brian has been carrying out research in Smart Cities for over 8 years and has more recently been looking at the convergence of the digital twin as a foundational building block to developing Smart Cities. He has represented the UK government on Global Expert Missions and trade missions for smart cities, across the world and is also on the roster for smart city consultants for the United Nations Habitat program. Brian is a board member and current sitting President of The Open Connectivity Foundation. The Open Connectivity Foundation (OCF) is a global, member-driven technical standards development organisation. Its 500+ members are working to enable trust, interoperability, and secure communication between IP-connected IoT devices and services. He is passionate about developing a cultural shift in the way public and private services are delivered with a focus on the creation of social impact, developing collaborative system thinking, whilst supporting SME growth and creating a triple helix approach with

guidance with support from academic partners Oxford University, City of Birmingham University and Liverpool John Moores University. This transformational change is predicated around the use of open standards and open source tooling

**Gigin Chandy George**, Co-Founding Engineer, Open Healthcare Network

Gigin Chandy George is one of the Founding Engineers of the Open Healthcare Network building Care HMIS, a Digital Public Good deployed across India. His work focuses on AI-enabled health systems, FHIR-based data standards, and scalable open source infrastructure for public health.

**Dr Jennifer Barth**, Research Director OpenUK

Jenn has more than 15 years of experience leading independent research on the intersections of emerging technologies and socioeconomic change. She provides companies with independent thought leadership and media engagement opportunities on global issues impacting and shaping our current and future technical-social lives. Her work spans the digital through to social and economic change. She has looked at sustainability, workforce skills and organisational competitiveness strategies through and beyond the pandemic with Microsoft and many other big and small organisations and works as the Chief Research Office researching the role of open source software and its potential to fuel the circular economy with OpenUK. She has experience working on the human impact of AI through fieldwork experiments with IBM Watson, Microsoft and other providers. She is skilled at blending research methods and working with people to bring to life the stories behind numbers. Dr Barth earned her DPhil in Geography from the University of Oxford.

**Julien Deswaef**, Regional Head of Social Change, Thoughtworks

Julien Deswaef is a Regional Head of Social Change at Thoughtworks. He is passionate about tech and its power to be a transforming vector of social change. His work connects the dots between organisation management, technology and social impact and creates initiatives that people want to embrace.

**Rakesh Dubbudu**, Founder, Factly

Rakesh is the founder of Factly, a Hyderabad (India) based civic-tech and public information initiative. He brings two decades of work in promoting greater access to public data and encouraging open data initiatives. Factly builds products in the public data/information space, to improve access and usability of public data.

**Sai Rahul Poruri**, CEO, FOSS United Foundation

Rahul is the CEO of the FOSS United Foundation where he works to support and promote FOSS creators and maintainers in India. He brings an interdisciplinary lens to all of his work, thanks to his background in Physics and his previous career as a Scientific Software Developer. Packages he used to maintain helped the 2020 NASA Mars Helicopter mission.

**Tarunima Prabhakar**, Co-Founder, Tattle

Tarunima is a technologist and a policy researcher and the founder of Tattle Civic Tech. Tattle builds open source technologies and datasets to amplify civic responses to online harms. She is a strong proponent of cross-disciplinary approaches to empower people with the tools that enable them to investigate and shape technological systems around them. Over the course of her career, she has worked on several award-winning Tech for Good projects with non profits and tech companies. Tarunima has held fellowships at the Centre for Responsible AI at IIT Madras, Carnegie India and the Center for Long-Term Cybersecurity at UC, Berkeley.



### Urvashi Aneja, Founder and Director, Digital Futures Lab

Urvashi is a leading researcher, policy strategist, and entrepreneur shaping the global conversation on technology and society. She is the Founder and Director of Digital Futures Lab (DFL), one of India's foremost think tanks focused on the societal impacts of emerging technologies. Her work seeks to realign technological innovation with the public interest and promote a more equitable distribution of technology gains. Recognised by MIT Management Review as one of the 50 people shaping India's digital rise (2025) and by TechCrunch as one of the influential women shaping AI globally (2024), Urvashi is a trusted advisor to governments, international organisations, and industry on digital and AI policy.

### Vanya Seth, Head of Technology, Thoughtworks

Vanya is an experienced technologist with a demonstrated history of working in the IT services industry. Vanya is a strategic consultant specialising in data mesh, platforms, delivery infrastructure, cloud native evolutionary architecture and AI first software delivery.

In her current role as Head of Technology for Thoughtworks in India, Vanya shapes new pursuits, strategically advises on client projects, and formulates meaningful and resilient technology strategies.

Vanya is also part of the Thoughtworks' Technology Advisory Board that puts together thoughts on emerging technology trends in the industry, resulting in the much sought after [Technology Radar](#).

Vanya is a passionate technologist with a knack for solving complex problems, at scale. She is also deeply involved with open source communities.

### Vivek Agarwal, Country Director, India, Tony Blair Institute for Global Change

Vivek heads the India practice for the Tony Blair Institute for Global Change. He is a global leader with vast experience in technology, development, and strategic partnerships across sectors. Vivek advises senior leaders, including Heads of State, on policy and strategic communications, managing complex projects globally. He has spoken at key forums at Energy Week (Portugal), India Global Forum, and Vibrant Gujarat Summit. Vivek's career highlights include advising Kristalina Georgieva on World Bank reforms and co-founding the Global Delivery Initiative. With degrees from Georgetown University and IIT Kanpur, Vivek brings expertise in driving public sector impact.

## 8.2 About the Creators of this Report

### OpenUK and OpenHQ

OpenUK is the unique open tech industry body for the business of open technology in the UK. It spans the opens – software, hardware, data, standards and AI and is the convening point for the UK's business, academic and contributing communities across open tech. Our work supports the UK's journey to become "The State of Open". Our organisation is run with the support of our volunteer community and their leadership in the tradition of open source delivering on three pillars: community, legal and policy and learning. Our Community is recognised through our world-leading open tech recognition programme including the OpenUK Awards (the Oscars of Open Source) now in their sixth year, New Year's Honours Lists and Ambassador Scheme.

OpenUK undertakes research and reporting both on its own account through its "State of Open Reports" and on a commissioned basis for third parties. Case studies, Thought Leadership, Surveys and desk-based research are included in our reporting which pushes the envelope and leads the way. Our Research and Reporting Show and Tell events coalesce the global open source research communities digitally to regularly update and share research practices and topics. OpenUK's new OpenUK Fellows Network for postgraduate researchers is launching in 2026 to encourage more academic research across the opens. The community's strength is channelled to enable a cohesive voice that responds to legislative proposals and sets policy. We have set the agenda in policy matters across openness in the UK and beyond. OpenUK's Policy work leads the conversations around open source licensing and commercialisation, AI openness and cloud computing and other key topics across open source, as they emerge. Engagement with UK policy makers is supported by a volunteer Policy Advisory Board and by experts across our volunteer Advisory Boards and the open source communities. Our Advisory Boards span AI, Communications Tech, Data, Finance, Hardware, Healthcare, Security, Software, Space, Sustainability and Quantum Computing. We are able to provide industry experts across the opens for speaking engagements, consultancy and advisory boards.

OpenUK is the second organisation established anywhere in the world with open source policy as its purpose, our approach is holistic to and representative of the entire open ecosystem. OpenUK undertakes a broad range of activities in support of its policy work and is a day one member of GaiaX and UK's GaiaX Hub Coordinator, hosted one of the biggest tech events at COP26, and was the first organisation in open tech to put a Sustainability Policy and Chief Sustainability Officer in place. Skills and Learning form our third pillar and our Learning work has spanned initiatives for children including our award winning Kids Camps which teach coding, open source and sustainability in a real world context; and exploring the business of open source through our Founder training. We have shared several hundred hours of digital training. Our ambitions include a UK apprenticeship module and adding open source to the UK curriculum.

OpenHQ was founded in the summer of 2025, to enable support of international policy initiatives on a global basis.

The State of Open Con has become one of the world's leading open source conferences since its inception by OpenUK in 2023. Our small events team deliver a series of unique events through the year and our community organise UK-wide OpenUK meet-ups. Contact OpenUK for more info mailto:[admin@openuk.uk](mailto:admin@openuk.uk)

### Symmetry

Jennifer Barth's consultancy, Symmetry looks beyond the surface and behind the curtain of the fundamental innovations and trends shaping our society, markets, culture, and values. We are academics and researchers looking at the intersections of emerging technology and socioeconomic impact, producing independent research for thought leadership and business solutions. Symmetry's mission is to share and grow knowledge about the interaction of technology and everyday lives. We want to understand the past, present, and future of human interaction with emerging technologies and socioeconomic changes—from behaviour to context, nature to nurture, origin to experiences—helping our clients engage their clients and public imagination. Symmetry is an FSP company.

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## 8.5 Methodology

The OpenUK research used a mixed method approach to explore and demonstrate the state of AI and open source in the UK. Interviews were conducted with industry leaders, founders and open source Software experts and included as case studies and thought leadership on AI and open source.

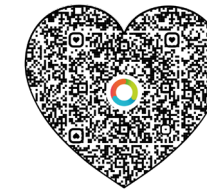
Runa Capital created a dashboard collecting data on open source repositories, users and activities. The data collection processes are automated, leveraging the APIs and tools provided by GitHub and updated daily. Runa gathers data about all repositories with more than 1000 stars at the time of collection. The author of the repository can be an individual or an organisation and where they own multiple repositories, each is considered as a separate entity. For any author who has at least one repository exceeding 1000 stars, information is collected on all repositories they own. A commit in the content of version control with Git is a record of changes made to a set of files. All commits to 1000+ stars repos are collected. Every instance where a user makes a change to the code is monitored. Users are collected in terms of repository authors and contributors including profile information, number of repositories owned and largest repository. To determine the user's geolocation the process uses the Google Maps API. This is updated for user profiles once per 6 months. Contributors from the United Kingdom are defined as users who have been geographically pinpointed as being in the United Kingdom through the geolocation process. These users are identified based on the location data they provide in their GitHub profiles, which is then verified and refined using geolocation tools. Repositories are categorised as being from the United Kingdom based on the location of their authors. If an author is identified as being based in the United Kingdom, either through their GitHub profile or through additional reliable sources, their repositories are included in this category. Additionally, companies as authors from the United Kingdom can be verified based on credible external sources, such as Crunchbase and Dealroom, which confirm the company's base of operations in the United Kingdom. This allows inclusion of repositories from these companies in the United Kingdom-specific analysis. To determine the Repo's location, the repo owner's location is first checked. If this is unavailable, analysis of company data from Dealroom and Crunchbase by repo domain may resolve the location. If not, then the top 3 contributors' countries are taken as the location. An AI repository is identified if its description or topics section contains any keyword from the AI keyword list.

For all repository lists in the report, the methodology first filters the data for AI topic = true. Where location is important it then filters for location. Location is determined by sorting contributors by total commits to a particular repository then checking the location of the top contributor. That location is then assigned to the group or, if needed, proceed to the second and then third contributor where location is unavailable. Once the data is ordered, a manual check is undertaken to determine the use of the repository and a decision is made as to its position in the list.

## 8.6 Sponsors

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## 8.7 AI Impact Summit

The India hosted [AI Impact Summit](#) takes place on 19 and 20 February 2026, in New Dehli.





"Everything we're doing here in the UK is geared towards ensuring that AI benefits everyone. That is how we will bring new jobs, fresh investment, and renewal to our local communities.

By sharing our expertise and tools as one of the world's leading AI powers, we can be the driving force behind the transformations that will improve lives for citizens across our allied countries."



**Kanishka Narayan**  
AI Minister, UK

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